

M19214



22300014057



Digitized by the Internet Archive
in 2014

<https://archive.org/details/b20406514>

Last Recd - R^y rec'd
Feb / 65,

Feb 7/65

7 2 1

Life Cor

1877

AN INTRODUCTION
TO
CLINICAL SURGERY.

Wie das Festen,
Ohne Hast,
Aber ohne Rast.

Goethe.

AN

INTRODUCTION

TO

CLINICAL SURGERY:

WITH A

METHOD OF INVESTIGATING AND REPORTING
SURGICAL CASES.

BY

FURNEAUX JORDAN,

DEMONSTRATOR OF ANATOMY AT THE QUEEN'S COLLEGE,
AND PATHOLOGIST TO THE QUEEN'S HOSPITAL,
BIRMINGHAM.



LONDON :

JOHN CHURCHILL, NEW BURLINGTON STREET.

MDCCCLVIII.

14825164

Wellcome Library
for the History
and Understanding
of Medicine

BIRMINGHAM:
PRINTED BY JOSIAH ALLEN, JUN.,
10, LIVERY STREET.

M19214

WELLCOME INSTITUTE	
LIBRARY	
Coll.	Wellcome
Code	
No.	W0100
	1858
	J82i

TO
HIS FORMER AND PRESENT PUPILS,
THESE PAGES
ARE RESPECTFULLY DEDICATED,
BY
THEIR FRIEND AND WELL-WISHER,
THE AUTHOR.

11233

P R E F A C E.

The following pages are designed for the use of students in Surgery.

The author has a firm conviction, arrived at after several years of familiar intimacy with students and their wants, that one of the requirements most strongly felt by them is a guide to the investigation and reporting of Surgical cases. Of such assistance for the student of Medicine there is store ample in amount and admirable in character.

This work invades a province in surgical literature as yet unentered; it is intended to introduce the student to, and to enable him

practically to apply, the knowledge which is largely offered to him in the works of many excellent surgeons in England, Scotland, and Ireland.

In the closing chapter a few injuries have been considered with the non-traumatic surgical diseases, rather than in the section devoted to injuries specially. This has been done where the symptoms suggest a strong analogy, as in traumatic aneurism, or where the gravity of the symptoms is out of all proportion to the physical extent of the lesion, as in hydrophobia.

The student may reap great advantage from recording the treatment in the report of a case, or, what is perhaps preferable, he may tabularise carefully, in a special note book, all the formulæ and remedial measures which he *sees* used.

Colmore Row, October, 1858.

CONTENTS.

CHAPTER I.—CRITICAL INQUIRY INTO THE PRESENT STATE OF SURGICAL INVESTIGATION.

Art and science.—Causes of the incompleteness of the science and art of surgery.—Imperfect investigation.—Imperfect diagnosis.—Imperfect registration.—Impossibility of statistics.—Cancer.—Resection of the knee joint.—How progress is possible Pp. 1—12.

CHAPTER II.—OBSERVATIONS ON THE INVESTIGATION AND REGISTRATION OF SURGICAL CASES.

Identity of the methods of examination and registration.—Commencement of the examination.—Anatomical order.—Precautions in examination.—Rostan's method, as introduced by Dr. Hughes Bennett.—Remarks on reporting Pp. 13—20.

CHAPTER III.—A METHOD OF INVESTIGATING AND REPORTING SURGICAL CASES.

Previous history.—Integumentary system.—Ossous system.—Articular system.—Muscular System.—Circulatory system.—Nervous system.—Organs of special sense, the eye and ear.—Digestive system.—Respiratory system.—Genito-urinary system Pp. 21—30.

CHAPTER IV.—AN EPITOMISED METHOD OF INVESTIGATING
AND REPORTING SURGICAL CASES Pp. 31—33.

CHAPTER V.—INSTRUMENTS AND AGENTS USED FOR OB-
TAINING SURGICAL KNOWLEDGE.

The microscope.—The lens.—The stethoscope.—The
otoscope.—The ophthalmoscope.—Atropine.—Chemical
reagents. — Specula. — Sounds. — Bougies. — Probes.—
The exploring needle Pp. 34—43.

CHAPTER VI.—THE POST MORTEM EXAMINATION OF SUR-
GICAL CASES Pp. 44—45.

CHAPTER VII.—THE ANALYTIC ESTIMATION OF SURGICAL
PHENOMENA.

Pain.—Tenderness.—Enlargement.—Diminution in
size.—Softness.—Hardness.—Elasticity.—Fluctuation.
—Pulsation.—Vibration.—Fragility.—Crepitation.—
Crepitus.—Bruit de soufflet.—Adhesion.—Deformity.—
Pyrexia.—Discolouration, transpareney, and opacity.—
Temperature, increased or diminished.—Discharges.—
Impaired mobility.—Lachrymation.—Intolerance of
light.—Emaciation.—Falling off of the hair.—The
pulse.—Hæmorrhage.—Delirium.—Thirst, &c.—
Vomiting.—Constipation.—Diarrhœa.—Intestinal
obstruction.—Cough, &c.—Difficult micturition.—Fre-
quent micturition.—Retention of urine.—Diseased
states of urine Pp. 46—64.

CHAPTER VIII.—THE SYNTHETIC ESTIMATION OF SURGICAL
PHENOMENA.

Diseases not confined to any particular system.—
Acute abscess.—Chronic abscess.—Uleers.—Phagedæna.
—Sloughing phagedæna.—Gangrene.—Onychia.—Paro-
nychia.—Lupus exedens and non exedens.—Erysipelas,
eutaneous, cellulo-eutaneous, and cellular.—Pyæmia.—
Syphilis.—Tetanus.—Hydrophobia.—Tumours.

CHAPTER VIII.—CONTINUED.

Diseases of the Integumentary System.—Warts. — Corns. — Cheloid tumour. — Boil. — Carbuncle. — In-growing of the nail. — Webbed fingers and toes.

Diseases of the Osseous System.—Periostitis. — Acute osteitis. — Chronic osteitis. — Suppuration of bone. — Abscess of bone. — Caries. — Necrosis. — Atrophy. — Hypertrophy. — Rickets. — Mollities ossium. — Exostosis. — Osteo-enchondroma. — Cystic tumours. — Osteo-cancer. — Osteo-aneurism. — Caries of the vertebra. — Psoas abscess. — Lateral curvature. — Spina bifida.

Diseases of Joints. — Acute synovitis. — Chronic synovitis. — Arthritis. — Strumous arthritis. — Chronic rheumatic arthritis. — Neuralgia of joints. — Loose cartilages in joints. — Morbus coxæ. — Inflammation of bursæ. — Bunion. — Ganglion.

Diseases of the Muscular System. — Strabismus. — Torticollis. — Talipes : the various forms. — Flat-foot. — Knock-knee.

Diseases of the Circulatory System. — Aneurism : the various forms. — Arteritis. — Nævus. — Varix. — Phlebitis. — Phlebolites. — Phlegmasia alba dolens. — Inflammation of the lymphatics. — Inflammation of the lymphatic glands.

Diseases of the Nervous System. — Neuroma. — Neuritis. — Neuralgia.

Diseases of the Eye. — Hordeolum. — Tumours of the lids. — Ophthalmia tarsi. — Trichiasis. — Entropion. — Ectropion. — Ancylobletharon. — Symbletharon. — Lagophthalmos. — Ptosis. — Xerophthalmia. — Epiphora. — Lachrymal diseases. — Ophthalmia : the various forms. — Pterygium. — Keratitis. — Opacity of the cornea. — Onyx. — Hypopyon. — Ulceration of the cornea. — Staphyloma. — Conical cornea. — Arcus senilis. — Sclerotitis. — Staphyloma. — Iritis. — Iredercmia. —

CHAPTER VIII.—CONTINUED.

Coloboma.—Myosis.—Mydriasis.—Albinism.—Cataract.—Glaucoma.—Weak sight.—Synchysis.—Retinitis.— Amaurosis.—Myopia.—Presbyopia.—Hydatids, &c., in the eye.—Chromato-pseudopsy.

Diseases of the Ear.—Inflammation of the external meatus.—Accumulation of cerumen or epithelium.—Polypi, &c.—Inflammation of the membrana tympani.—Inflammation of the tympanum.—Throat deafness.—Nervous deafness.

Surgical Diseases of the Digestive System.—Salivary fistula.—Cancerum oris.—Hare-lip.—Epithelioma of the lip.—Rauula.—Tongue-tie.—Glossitis.—Abscess of the tongue.—Prolapse of the tongue.—Syphilitic ulceration of the tongue.—Epithelioma of the tongue.—Cancer of the tongue.—Cleft palate.—Stricture, dilatation, and sacculation of the œsophagus.—Tonsillitis.—Hernia.—Stricture of the rectum.—Cancer of the rectum.—Ulcer of the rectum.—Imperforate anus.—Fissure of the anus.—Cancer of the anus.—Fistula in ano.—Hæmorrhoids.—Prolapsus ani.—Rectovesical fistula.

Surgical Diseases of the Respiratory System.—Nasal polypus.—Ozæna.—Acute laryngitis.—Ulceration of the larynx.—Œdema glottidis.—Polypus of the larynx.—Foreign body in the larynx.—Bronchocele.

Diseases of the Genito-urinary System.—Cystitis.—Chronic cystitis.—Paralysis of the bladder.—Stone in the bladder.—Tumours of the bladder.—Inflammation of the prostate gland.—Abscess of the prostate gland.—Hypertrophy of the prostate gland.—Cancer of the prostate gland.—Calculi of the prostate.—Gonorrhœa.—Urethritis.—Urethral abscess.—Stricture of the urethra.—Extravasation of urine.—Urinary fistula.—Epispadias.—Hypospadias.—Phymosis.—Paraphy-

CHAPTER VIII.—CONTINUED.

mosis.—Balanitis.—Herpes præputialis.—Warts of the penis.—Cancer of the penis.—Malposition of the testicle.—Orchitis.—Atrophy of the testis.—Hydrocele.—Eneysted hydrocele.—Hydrocele of the cord.—Hæmatocele.—Varicocele.—Tumours of the testis.—Spermatorrhœa.—Cancer of the scrotum.—Edema, erysipelas, and hypertrophy of the scrotum.—Vulvitis and vaginitis.—Vesico-vaginal fistula.—Entero-vaginal fistula.—Recto-vaginal fistula.—Imperforate hymen.—Varicocele of the labia.—Cystocele.—Hypertrophy of the breast.—Inflammation and abscess of the breast.—Neuralgia.—Tumours of the breast.

Injuries.—Shock.—Traumatic delirium.—Wounds of the viscera.—Fractures generally.—Fracture of the nasal, malar, and superior maxillary bones.—Fracture of the inferior maxilla.—Hyoid bone.—Clavicle.—Scapula.—Humerus.—Radius and ulna.—Ribs.—Pelvis.—Femur.—Patella.—Tibia and fibula.—Foot.—Dislocations generally.—Dislocation of the lower jaw, clavicle, shoulder, elbow, wrist and hand, hip, patella, knee, ankle and foot.—Injuries pertaining to the cerebro-spinal system Pp. 65—147.

AN INTRODUCTION TO CLINICAL SURGERY.

CHAPTER I.

ERRATA.

Page 2, line 12, *for* "second" *read* "former."

Page 60, line 19, *for* "hairs" *read* "hair."

principles, or generalised facts, which constitute a science, the art or arts which result from its application are imperfect, limited, and changeable. How much more imperfect, more limited, and more changeable, then, must that art be which depends upon a science in itself incomplete and uncertain. Such a science is that of Surgery.

What causes are capable of determining the incompleteness and the uncertainty of the

important department of learning under consideration? Many. Several admit of removal, others, it would seem, do not. In the latter category may be placed those which result from the mysterious agencies which have been arranged under the heads of solidism, humorism, and vitalism. These agencies are justly called mysterious when considered in relation to the human race; they are much more recondite when each individual illustrates their perplexing mutability.

The second category of causes comprises those which admit of removal; and these the zealous surgical student will surely strive to diminish. One prominent and faulty feature of modern medical investigation is the rigid exclusiveness of the attention which is paid to the local lesion. It is deemed, and justly so, a satisfactory proceeding to indicate the diagnosis between an abscess, a hernia, an aneurism, a varicosity, a collection of serum, a morbid growth, an inflammatory, tubercular, or cancerous exudation. It is also very common, if the local lesion presents certain peculiarities, to interrogate the system concerning a few very palpable marks indicating a constitutional taint,

as the strumous, the syphilitic, the rheumatic, and the gouty. But is the discovery of a blue iris, light hair, emaciation, a sallow skin, gravel in the urine, or an irritable joint a sufficiently accurate estimation of all the systemic aberrations from health which may accompany a local mischief? It might be supposed that the very minuteness and exclusiveness of the attention which is paid to the chorographic mischief would afford a sufficient explanation of the comparative neglect in regard to the state, organic and functional, of the general system. But is the local investigation so detailed and searching, or any record which may be made so faithful and comprehensive, that we may be asked to excuse any more extended notice of the general frame, except the colour of the eye or the skin, the presence of red sand in the urine, or pain in a joint? Emphatically, no! Our scrutiny of the part is but a little less vague than our scrutiny of the whole. Even when the object of examination lies within a few superficial inches, all the phenomena are not ascertained which are appreciable by the organisms of sight, hearing, smell, taste, and touch. If the affection involves several struc-

tures no kind of order regulates their examination; there is a dance from the symptoms of one texture to those of a third or a fifth, and back again to those of a second or a fourth. Adjacent parts are very superficially, distant parts scarcely at all, observed. It must also be admitted that even the most important organs, in which the secret of life itself is lodged, are unquestioned. We do not ascertain the condition of the heart, or lungs, or brain, or the organs of sense, or the viscera of the abdomen. The secretions are unexamined. Discharges are washed away. It is a very natural result of so partial observation, conducted without clear principles of any description, that diagnosis should be vacillating, indefinite, and untruthful.

It is true that a diagnosis is a theory inferred from a series of facts—a theory which shall explain them, more or less satisfactorily. I shall not stop here to speak of the various interpretations of the terms “theory” and “practice,” of the sneers which many superficial individuals cast on the former and the great pride they feel in the latter, but I shall simply observe that every practice is the application of some theory, and that frequently the

theory of the "practical" man is one abounding in error and antiquity. If the facts, then, in any given case are incompletely, indefinitely, or untruthfully elicited, how little confidence can be placed in the completeness or the applicability or the truthfulness of the diagnosis. Those individuals who attempt a greater than usual scrutiny of the symptoms of a case, medical or surgical, have frequent occasion to feel that a superficial examination leads to one diagnosis, while a second or third investigation leads to another and a different one. What is still more significant, it is not very uncommon for an unusually careful estimation of the symptoms in a given case not only to overturn a premature or a pretty diagnosis, but to overturn all diagnoses whatever. Assuredly it is to be regretted when phenomena are narrowed, as they sometimes are, to *fit* a diagnosis. Not in this manner is the science of surgery advanced. When we consider, on the one hand, the imperfect evolution of data as the bases of diagnosis, and, on the other hand, the defective knowledge indicated by the diagnoses themselves, the attempt to obtain more exact knowledge, and to apply to such knowledge terms of

greater precision, cannot be regarded as a work of supererogation.

The narrative of what is vague and incomplete must necessarily be itself vague and incomplete. The reports of surgical cases are as indefinite and as partial as the knowledge they are intended to convey. Indeed, the custom of reporting surgical cases, in any manner, is a too uncommon one. In hospitals students are more anxious to apply a bandage with certain graceful folds than they are to place a diseased material under the microscope, to discriminate shades of dulness under the clavicle, to detect pulsation of the arteria centralis retinae, or to appreciate the degree of opacity or the existence of a perforation of the membrana tympani. The term "surgical dresser" is not a convertible term either with "surgical observer" or with "surgical reporter." Even published reports are few, and, as a rule, imperfect. Yet how many the advantages which would accrue, both to the surgeon and surgery, from a more complete and universal method of describing surgical disease. Add to a minute and complete investigation of all the parts of the human whole a

narrative, at once detailed, truthful, and comprehensive without being verbose, and witness the train of beneficial results. Not the least, nor yet the greatest, advantage is that the attempt to describe vividly and faithfully will lead to minute and careful examination. The simple advantage, however, of reporting *per se* must not be exaggerated. Description will never determine the *directions* in which, nor the methods by which, observation should be exercised. But bearing this, and other circumstances, to be subsequently referred to, in mind, the advantages of description cannot easily be overestimated.

It is a constant cause for complaint, that statistics constituting in themselves a science illuminating so many others, and affording the greatest approximation to exactness in the inexact sciences, is not, and cannot be, applied to the very inexact science of surgery. The character of the reports of surgical data is such, that statistics have scarcely been attempted, or where attempted have been almost useless. There is little doubt, however, that when statistics attain a tangible character in surgery, at that moment true progress will commence ;

principles now doubtful will stand out in greater clearness or disappear, new principles will be divulged, and art, long either cramped or blindly venturesome, will glide into higher regions of decision and catholicity.

✓ Opportune illustration of the extreme necessity of statistical knowledge, and of the complete reports upon which it must depend, is near. Cancer in its various forms is a subject of anxious investigation at the present time. We possess some knowledge of its external characters, its tendencies, its results, and a little of its structure; but its causes, remote or proximate, the mode of its commencement, its pathology, on these points our knowledge is sufficiently slender. Its treatment, too, is quite as unsatisfactory. We may compress, cauterise, or cut for a few years, but can we cure? We are not without abundant speculation and hypothesis on the difficulties of cancer—a theory we have not. One hundred carefully drawn up reports, embodying every information of all the components of the body, solid and fluid, of the food, secretions, and discharges, which microscopy, stethoscopy, chemistry, and other agencies can afford, would lead to new and valuable results.

To form such a table would be at the expense of much time, and trouble, and money. *One* person, however able, could scarcely perform the task, but the combination of able persons might accomplish much. Surely attention will not be much longer given to anything less than honest work, with such aids to investigation as we now possess. Of inane speciosities, the surgical literature of cancer is already too uncomfortably redundant. Let me take another illustration from the department of operative surgery—an illustration which not merely exposes the want of any complete system of “reporting,” but shows the entire absence of the simplest reports of the simplest cases. At the present moment surgeons are asking, what is the relative mortality of amputation of the thigh, and resection of the knee joint? Amputation at the thigh is one of the commonest, simplest, and easiest operations, yet the rate of mortality in this procedure is still to be ascertained. Resection of the knee joint is a more recent operation; from its recency as well as several other causes, its statistics are unsatisfactory—the principal cause of those alluded to being the absence of sufficiently numerous,

sufficiently comprehensive, and sufficiently honest reports. The surprising results from the application of statistical knowledge, evidenced in the proceedings of insurance societies are well known. Recently M. Quetelet has demonstrated with unerring accuracy on statistical grounds, the number of individuals, in a given population, who will commit suicide, the causes, and the number due to each cause, the instruments used, and the numbers attributable to each instrument.

What are the conditions which shall ensure a more complete evolution of knowledge, a closer scrutiny of phenomena, and a more complete method of recording the results of observation? It has been said that the eye sees only what it has been educated to see. The truth embodied in this remark is one great difficulty in the exercise of an unlimited and an unprejudiced observation. The reporter of a case, too, is strongly tempted to invest all surgical phenomena with accustomed and facile phraseology, a habit which he even regards as clever and useful. Very frequently a limited assortment of words is made to represent an infinite variety of wonderful phenomena—phenomena

at once new, surprising, intricate, or even incomprehensible. The metaphysical student, turning from the bed side to the register, would be forcibly reminded of Lessing's remark on psychological systems—"Thousand to one, the goal of your philosophy will be the spot where you become weary of thinking." It will be my object, in another part of this work, to assist the surgical student to examine and record cases by a methodic and comprehensive, though briefly indicated, plan; to offer suggestions on the methods and instruments which may be used in obtaining surgical knowledge, with the analytic and synthetic value of such knowledge when acquired. Here I will merely point out the value of a liberal education, more especially such an education as shall develop the observing and reflective phases of the mind, and the necessity of cultivating a constant habit of description, not, at first, of disease, or, at any time, of disease only.

In surgery, progress should ever be the student's aim. To record what has been recorded, to know what has been known, to do what has been done, is, with certain precautions, advantageous, but it is not enough.

To point out error in the present and strive for progress in the future, is not the dream of an enthusiast, but the hope of a worker. An enthusiast would entertain far loftier hopes than these. Individual work, whether of observation or historic record, on the vastest scale, would be to him small beginnings. The future would disclose to his far-seeing eye concerted work, combination for chemical analysis, combination for microscopy, combination for the study of statistics, the appointment to hospitals of statisticians, physiological chemists, microscopists, registrars, and artists. Reports of cases, too, would contain all the information which could be afforded by such combination.

But 'here and now' the student has simply to remember the importance of individual culture, learning, and wisdom; that even now it is required of the individual surgeon that he possess, in addition to a perfect knowledge of anatomy and, so-called surgery, a familiarity with every agency which can increase his knowledge of disease, as well as of all the means which can effect its removal.

CHAPTER II.

OBSERVATIONS ON THE INVESTIGATION AND REGISTRATION OF SURGICAL CASES.

The method of reporting cases, as described in the next chapter, will also be a guide to the mode of eliciting the various phenomena of surgical disease. It is usual to commence the examination of a medical case by asking two questions—Where do you feel pain? and, How long have you been ill? In surgical cases, perhaps, the best preliminary interrogations would be—Where does your ailment lie? How long have you suffered from it? If delicacy and kindness and gentleness are so necessary in medical cases, how much more so are they in the investigation of surgical affections, where a physical examination of painful and tender parts is so frequently necessary. The expression of the countenance, the *apparent* age, the

state of mind, as indicated by the countenance and the manner, the emaciation or stoutness, the colour and state of the skin, and the walk or position of the patient may all be observed while the preliminary queries are being put and answered. The antecedent history I have placed first, because, independently of the valuable information it affords, the patient's calmness and confidence are more easily secured; and I do not think a philosophic mind, or a mind carrying out a fixed plan, will permit any historic knowledge to warp or limit the subsequent examination, although I am fully sensible of the danger which has induced Dr. Hughes Bennett to place the history in the last place.

In examining eruptions or the granulations of ulcers a lens may be used with advantage. In examining enlargements their anatomical sites and relations will suggest methods of examination. The word "enlargement" is used in the next chapter in its widest sense, so as to include morbid growths or tumours properly so-called, inflammatory exudation (swelling), tubercular and cancerous exudations, cedema, anasarca, emphysema, abscess, extravasation of blood, urine, or other fluid; displacement—as

of the lens underneath the conjunctiva, or of the intestines under the integument of the abdomen; dilatation—as of the arteries, veins, ducts, &c. By the use of the word “enlargement” in this comprehensive, and, I trust, not improper, sense, I am enabled to attain a great degree of brevity without impairing the student’s guidance to examination and description. The *anatomical* position of the tumour then, I repeat, will suggest many methods of examination by inspection, palpation in various ways, mensuration, percussion, and auscultation. For instance, if an enlargement be in the vicinity of the abdomen it is necessary to ascertain whether the tumour receives an impulse from coughing, thus showing a communication with the abdominal cavity as in hernia. An enlargement in the vicinity of a large artery will suggest the necessity of ascertaining the presence or absence of pulsation, and if pulsation, whether it be equally diffused, as in an aneurism, or partial, as in an enlargement contiguous to an artery. The enlargement of a dilated vein and a commencing aneurism will disappear by pressure exerted in such a manner as *anatomical* knowledge suggests. In all

enlargements and in all surfaces the character of the resisting power is so various, from the various density of solids and fluids, or of both, that the surgeon will not feel surprise that some metaphysicians have elevated the appreciation of resistance to the dignity of a special sense—the sixth.

In ascertaining the presence of tenderness in a joint, pressure of the articular surfaces together will detect its presence in the cartilages. When there is enlargement of a joint it is particularly important to notice carefully its seat.

For the examination of the heart and the lungs, and for the use of the microscope and chemical tests, I earnestly advise the surgical student to study works on Clinical Medicine: I may mention Dr. Bennett's among others.

In examining the eye, if it be necessary to lift the upper lid it should be carried directly upwards to the margin of the orbit, and not upwards and backwards against the eyeball. Where there is much photophobia, chloroform may be given. For the inspection of the crystalline lens, vitreous humour, retina or choroid, the iris must be dilated by means of

atropine. The use of the lens and the ophthalmoscope, in the examination of the eye, I shall refer to subsequently with other instruments used for the purpose of eliciting surgical knowledge. With reference to the digestive as well as the circulatory, respiratory, genito-urinary, and indeed all the systems, I must impress upon the advanced surgical student the necessity of a wide knowledge of medicine, theoretical and practical. He is the perfect surgeon who brings to the surgical bed side all that anatomy, physiology, and medicine can teach.

The method detailed in the next chapter is a modification and an extension of the plan propounded by Dr. Hughes Bennett, and which he adopted from Professor Rostan, for the examination and registration of medical cases. Dr. Bennett I have long esteemed as the great pioneer of modern medicine. The science of surgery, too, is greatly indebted to him. In the pathology of cancer, and the exudations generally, his researches are truly invaluable. I cannot stop with the expression of my own debt to him, but earnestly advise the surgical student himself to ponder frequently over

the productions of the great master. I have placed the order of the various parts and their symptoms on a basis as strictly anatomical as possible. The relation of surgery to anatomy will be enforced in every step of our progress. The student, in his anatomical studies, examines the bones, then the ligaments, and subsequently, in due order, the muscles, vessels, and nerves. Although all the organs of special sense are most intimately connected with the nervous system, the organs of sight and hearing are so complex in structure, and their diseases are so manifold and important, that I have given them great prominence in the following scheme. In describing a lesion, in whatever structure, after all the phenomena of the structure, principally and primarily affected, are described, the condition of the adjacent parts should be referred to. As surgical affections are, for the most part, indicated on the surface of the body by an alteration of form or colour or resisting power, I trust I have not violated a proper anatomical basis by placing the integumentary system immediately after the historic memoranda.

The method alluded to is lengthy, but every effort, consistent with the object in view, has

been made to secure brevity. It has been my duty to indicate the symptoms which are possible in each anatomical system. Where one or several systems are normal, a brief statement to that effect will preclude the necessity of detailed reference.

The tendency to detail is, however, in every way preferable to one of an opposite character. The omission of points that seem unimportant to the reporter now, may render the case valueless to the surgical investigator ten years hence. It is better to state that the osseous and articular systems are healthy in a case of piles, than to make no mention of them in an inflammation of the iris or an eruption of the skin. It is preferable to say that the cardiac phenomena are natural in an encanthis, than to omit any reference to them in prominence of the eyeball. An allusion to the healthiness of the respiratory functions in a case of rheumatism would be more excusable than the absence of comment upon them in a fistula in ano.

In describing a case, exact and simple language should be used. Anatomical structures should be given in speaking of site and

extent. Measurement, in feet and inches, should be given for size. Fluid measurements for the quantities of discharges or other fluids.

In reporting cases no opinions should be stated, directly or indirectly, that is, no word should be used suggestive of diagnosis or theory. "Hernial tumour," "aneurismal tumour," "glandular enlargement," "inflammatory induration," are bad expressions in a report, because they convey theory or diagnosis where facts only should be described.

In watching the subsequent progress of a case, changes may be described as they occur; these will be rapid in acute, slow in chronic, cases. The mode of recovery, or the mode of death, cannot be observed or recorded with too great care.

CHAPTER III.

A METHOD OF INVESTIGATING AND REPORTING SURGICAL CASES.

I.—PREVIOUS HISTORY.—Name ; age ; sex ; residence ; occupation ; married or single ; hygiene ; habits, irregularities, excesses ; hereditary tendencies ; previous illness ; present attack, commencement, mode of invasion, progress, treatment. Injuries—how done, by what means, results to present time. In female cases, children, miscarriages, catamenia, lactation.

II.—INTEGUMENTARY SYSTEM.—Expression of countenance ; obesity ; emaciation ; colour, rough or smooth, dry or moist ; temperature ; pain, tenderness ; eruptions, red patch, vesicle, pustule, pimple, scale, tubercle, stain, vesica-

tions, cicatrices; ulcers, characters of their granulations and discharges; enlargements, their number, seat, and character—painful, tender, hard, soft, elastic, fluctuating, transparent, globular, lobulated, irregular, loose, adherent, pigmentary deposit, hæmorrhage, ulceration, apertures, discharge; condition of nails and hair; injuries, extent and character.

III.—OSSEOUS SYSTEM.—Pain, uneasiness, tenderness; soft or fragile; enlargements, their characters; diminution in size; deformity, its character; ulceration; loose portion on surface, or comprising entire thickness, or in articular extremity; if bone exposed, its characters; condition of adjacent parts, especially apertures, their character and discharges; injuries, their nature and extent.

IV.—ARTICULAR SYSTEM.—Pain, its character; pain in a neighbouring joint; tenderness on pressure; enlargement, its position, extent, and form—soft, hard, or fluctuating; motion—painful or limited or impossible, if limited, in what direction and to what extent; sound evolved from a joint on motion, its character; deformity, its character; position of limb for

ease or of necessity; lengthening or shortening; position and form of individual bones of a joint; loose bodies in interior; injuries, their character and extent, superficial or entering into the cavity. Condition of structures surrounding the joint, as skin, tendons, bursæ, vessels, &c.

V.—MUSCULAR SYSTEM.—Pain, its character; tenderness; enlargement or diminution in size; contraction; hardness; immobility; temperature; rupture or other injury.

VI.—CIRCULATORY SYSTEM.—*Heart*: pain; action and rhythm; situation where the apex beats; extent of dulness determined by percussion; murmurs—if abnormal, their character, and the position and direction in which they are heard loudest. *Arteries*: character of the pulsation. In the course of an artery—pain or tenderness; enlargement—its extent, form, fluctuation, temperature; if pulsation, whether laterally, or at the apex, or both; murmur—its character as revealed by the stethoscope; hard or soft; thrill to fingers; effects of pressure. Wounds—division of the coats partial or complete, contraction, retraction, coagulation of blood; hæmorrhage, on

the surface or into the tissues; condition of adjacent parts. *Veins*: in the course of a vein—pain or tenderness; enlargement, extent, form, hardness, softness; wounds, their character; condition of adjacent parts. *Lymphatics*: painful or tender or hard. *Lymphatic glands*: enlargement, pain, tenderness; hard or soft or fluctuating; if a wound, its character; if a discharge, its characters.

VII.—NERVOUS SYSTEM.—*Brain*: intelligence, augmented, perverted, or diminished; pain; delirium; hallucination; stupidity; idiocy; monomania; sleep, dreams; vertigo; stupor; coma; unconsciousness; confusion; capability of being roused; state of special senses; injuries—protrusion of brain; loss of substance; condition of adjacent parts. *Spinal cord and nerves*: pain, tenderness; general sensibility—increased, diminished, or absent; motion—natural or perverted or impossible; fatigue; trembling; convulsions; contractions; rigidity; paralysis. In the course of a nerve—enlargement, its form, extent, pain; proximity of injury or tumour or cicatrix; curvature of spine—its characters; enlargement—its extent and form, hard,

soft,—or fluctuating. In any lesion of cerebro-spinal axis, note the condition of parts below.

VIII.—ORGANS OF SPECIAL SENSE.—EYE: pain, burning as of foreign body, aching, tensile, acute; in eyeball or adjacent parts; intolerance of light, slight, moderate, or severe; vision, long, short, dim, perverted, or absent; spectra; lachrymation; protrusion; parallelism of eyes impaired. *Eyelids*: enlargement—its extent, form, hard, soft, fluctuating, œdematous; colour; everted or inverted; adhesions to globe or to each other; immobility—open or shut. Margin of lids—red, discharging; direction of eyelashes. *Conjunctiva*: colour; state of vessels; enlargements or discharges—their character. *Lachrymal apparatus*: state of punctum, canaliculus, lachrymal sac, and nasal duct. *Cornea*: colour; roughness; opacity—its degree, on surface or between laminae; ulceration; pus on surface, or between lamina or in anterior chamber; protrusion; convexity; white circle. *Iris*: colour, tubercles, adhesions, immobile, protrusion through aperture in cornea; pupil—its colour, shape, size—large, small, or closed. *Lens*: colour, opacity, displacement. (Dilate

the pupil with atropine, and use the lens or ophthalmoscope: the latter or both must be employed in examining the vitreous humour, the choroid, and the retina.) *Vitreous body*: colour, opacity, floating bodies. *Choroid*: colour, condition of vessels. *Retina*: opacity; vessels, number, size, pulsations; separation from choroid by effusion or extravasation of blood. *Entrance of optic nerve*: dimensions, colour, vessels, concavity. Morbid growths within or adjacent to the eye—their site, extent, form, and other characters. If an injury, its nature and extent.

EAR.—*Auricle and pinna*: form, dimensions, eruptions, or enlargements—their character. *Meatus*: pain, swelling; wax, desquamated epithelium; colour; granulations, morbid growths—their characters; eruptions. *Membrana tympani and tympanal cavity*: pain—its degree, increased by coughing or sneezing or swallowing; tenderness on pressure; sense of fulness or “woolliness” in the ear; unnatural noises; deafness, partial or complete; *membrana tympani*, as examined by speculum, dull, opaque, red; ulceration; aperture; discharge—quantity, colour, and consistence; capability of

tasting fluids put in at the ear; condition of adjacent parts. *Eustachian tubes*: pain, acute, throbbing, extending from the tonsil to the ear; condition of fauces; phenomena revealed to otoscope or stethoscope. Variableness of deafness from position, excitement, health, &c.

IX.—DIGESTIVE SYSTEM.—*Lips and cheeks*: fissures; ulcers, simple, circumscribed, induration, nodules; discharge—its characters; enlargements—their character. *Teeth*: their condition. *Gums*: pain; tenderness; swelling; ulceration; morbid growths—their characters. *Tongue*: fur; fissures; taste; papillæ; mode of protrusion; ulceration, simple or circumscribed, induration, nodules; enlargements—their character. *Palate*: fissure; ulceration; enlargements. *Salivary glands*: pain; tenderness; enlargements—their character; secretion, increased or diminished. *Tonsils*: pain; enlargement; ulceration; discharge; change of voice. *Pharynx and œsophagus*: paralysis; spasm; stricture, as ascertained by bougie; deglutition—painful, difficult, impossible; enlargements; foreign bodies. *Stomach and intestines*: appetite; thirst; epigastric pain or tenderness;

nausea ; vomiting—character of matters vomited ; flatulence ; eructation ; abdominal pain, or tenderness, or distension ; borborygmi ; constipation ; diarrhœa — character of dejections ; enlargement or diminution of the liver, spleen, and pancreas, as ascertained by inspection, palpation, and percussion. *Rectum and anus* : imperforate anus, seat of closure, sphincter, present or not ; fissure ; enlargement. *Rectum* : pain ; tenderness ; itching ; heat ; weight ; throbbing ; discharge—its characters ; ulcer—its characters to touch ; enlargements—their character ; prolapse ; defæcation—painful, difficult, or impossible ; spasm ; stricture — its position as ascertained by bougie ; condition of adjacent parts. Injuries—their extent and character, &c.

X.—RESPIRATORY SYSTEM.—*Nose* : discharge—its character ; enlargements—their character ; pain ; tenderness ; nasal aperture—enlarged, diminished, or closed. *Larynx and trachea* : voice—its characters, hoarse, shrill, difficult, or absent ; respiration difficult ; sounds accompanying inspiration and expiration ; which most difficult, inspiration or expiration ; pain ; cough ;

hiccough; spasm; phenomena ascertained by percussion and auscultation of larynx and trachea; enlargements—their character; foreign bodies; injuries—their character and extent. *Lungs*: respiration—difficult, quick, or painful; odour of breath; expectoration—how performed—its character; cough—its character; form of chest and respiratory phenomena, ascertained by inspection, pulsation, mensuration, percussion, and auscultation. Injuries—their extent and character. *Thyroid body*: enlargements—their characters.

XI.—GENITO-URINARY SYSTEM.—*Penis*: prepuce, contracted before or behind the glans; ulcers, discharge or enlargements—their characters; deficiency of the urethral wall, above or below. *Urethra*: stricture—position and nature, as ascertained by bougie; micturition difficult, painful, or impossible; character of stream; discharges—their character; foreign bodies; condition of adjacent parts. *Prostate*: weight; pain; throbbing at neck of bladder; tenderness or enlargement, as ascertained by perinæal and rectal examination; micturition frequent, difficult, or impossible; calculi, as

ascertained by sound. *Bladder*: micturition frequent, nocturnal, dribbling, difficult, interrupted, or impossible; urine and discharges—their physical, chemical, and microscopical characters; enlargements or calculi, as ascertained by sound; condition of adjacent parts. *Testes*: position in abdomen or inguinal canal or scrotum; painful, tender, hard, soft, or fluctuating; enlargements—their character; condition of adjacent parts. *Scrotum*: ulcerations or enlargements—their character. *Kidney*: lumbar pain; state of urine. *Vulva*: pain or tenderness; the character of ulcers; discharges; enlargements; communication between bladder and vagina, or vagina and rectum. *Hymen*: thick; imperforate. *Uterus and vagina*: prolapse; ulceration; catamenia; other discharges; enlargements. *Mammæ*: pain; tenderness; enlargements—their character; state of secretion. *Injuries*—their extent and character.

CHAPTER IV.

EPITOMISED METHOD OF INVESTIGATING AND REPORTING SURGICAL CASES.

I.—PREVIOUS HISTORY.—Name ; sex ; age ; occupation ; married or single ; habits ; hygiene ; history of health or disease.

II.—INTEGUMENTARY SYSTEM.—Expression of countenance ; state of skin ; enlargements—their character and extent (under this head the student may describe the tumours generally) ; ulceration ; injuries—their extent and character.

III.—OSSEOUS SYSTEM.—Pain ; tenderness ; enlargements—their extent and character ; injuries—their extent and character ; condition of adjacent parts.

IV.—ARTICULAR SYSTEM.—Pain ; tenderness ; enlargements—their character ; mobility—how far impaired ; injuries—their nature and extent ; condition of surrounding parts.

V.—MUSCULAR SYSTEM.—Pain; enlargement; diminution in size; contraction; paralysis; hardness; softness; rupture or other injuries.

VI.—CIRCULATORY SYSTEM.—*Heart*: character of cardiac phenomena. *Arteries*: pain; tenderness; pulsation; enlargements and injuries—their characters. *Veins, lymphatics, and lymphatic glands*: the symptoms connected with each.

VII.—NERVOUS SYSTEM.—*Brain*: intelligence—its condition; sleep; injuries. *Spinal cord and nerves*: motion; paralysis; spasm; convulsions; enlargement; injuries.

VIII.—ORGANS OF SPECIAL SENSE.—*Eye*: symptoms presented by eyelids, conjunctiva, lachrymal apparatus, cornea, lens, vitreous body, choroid, and retinal tunics, and the optic papilla. *Ear*: symptoms connected with external meatus, membrana tympani, tympanum, nervous apparatus, and throat.

IX.—DIGESTIVE SYSTEM.—Symptoms presented by the lips, cheeks, and gums, tongue, salivary glands, pharynx and œsophagus, stomach, intestinal canal, and anus.

X.—RESPIRATORY SYSTEM.—Symptoms presented by larynx, trachea, lungs, thyroid body, and nares.

XI. GENITO-URINARY SYSTEM. Symptoms presented by penis, urethra, prostate gland, bladder, testes, scrotum, vulva, vagina, uterus, and mammae.

CHAPTER V.

INSTRUMENTS AND AGENTS USED FOR OBTAINING
SURGICAL INFORMATION.

✓ The MICROSCOPE.—The use of this instrument is now quite indispensable. In the examination of tumours, both before and after death, of the tissues generally, of the saliva, milk, blood, pus, sputum, vomited matters, fæces, uterine and vaginal discharges, mucus, dropsical fluids, urine, cutaneous eruptions and ulcers, discharges of every kind, whatever their source, no satisfactory results can be obtained or recorded without its assistance. / The construction of the microscope, its use and its revelation, are not within the sphere of the present work. The student will find much valuable information on the microscope in several authors; but to use the instrument himself is of chief importance.

The LENS.—The lens of various powers is of extreme utility in the examination of the cornea, iris, and crystalline lens, and the various forms of cutaneous disease. Its use is very frequently required in conjunction with that of the ophthalmoscope.

The STETHOSCOPE.—The stethoscope is as useful a surgical instrument as the sound or the probe. For its use in ascertaining thoracic phenomena the student will find little difficulty in obtaining information, the most concise or the most detailed, in medical authors. It is extremely useful for the detection of crepitus in obscure fractures, especially those of the shoulder, hip, and other joints; in the diagnosis of doubtful tumours; in ascertaining the presence of morbid growths or foreign bodies in the trachea and larynx; in listening over the bladder where the phenomena elicited by the sound are of an uncertain character; in discovering the grating sound in a joint affected by chronic rheumatism and arthritis. The discovery of the foetal heart sounds is sometimes of use for surgical purposes.

The OTOSCOPE is an instrument analagous to the stethoscope, with a larger end to place over

the ear. It is used to ascertain the patency or closure of the Eustachian tubes, where there is an enlargement of the tonsils and a relaxed condition of the mucous membrane of the throat. When used, the larger end is placed over the patient's ear, and the other end to the ear of the surgeon; the patient is then directed to close the nose and mouth, and to swallow, or attempt to blow the nose. The surgeon will hear the shock of air against the membrana tympani if the tubes are pervious, and a gurgling sound if they contain fluid. The absence of sound will denote their closure as a general, though not an absolute, rule.

The OPHTHALMOSCOPE is destined to remodel our knowledge of the deeper structures of the eye. An Englishman (Cumming) first broached the idea of illuminating the interior of the eye by reflected light. The practical realisation of the idea was left for Helmholtz, who invented the ophthalmoscope, an instrument which has been modified in various ways by Coccius, Jäger, Ruete, Anagnostakis, Libreich, Montaut, and Desmarres. In a dark room, a light—that of a moderate lamp is a very good one—is placed on a level with the patient's eye, but

behind it. The observer, who is in front of the patient, then places the ophthalmoscope close to his own eye, so that the mirror will reflect the light into the eye which it is desired to examine, before or near which is placed a lens. It will greatly facilitate ophthalmoscopic examination to remember that the focal distance of the ophthalmoscope is six, while that of the lens used with it is two, inches. By this instrument the lens, vitreous body, the choroid, and the retina may be investigated. In most cases it will be desirable to dilate the pupil by means of atropine.

ATROPINE.—In all examinations of the parts in the eyeball situated behind the iris, with or without the ophthalmoscope or lens, it is advantageous, and frequently indispensable, to dilate the pupil. This may be done most easily and effectually by putting within the eyelids a few drops of a solution of two grains of sulphate of atropine in an ounce of distilled water.

CHEMICAL REAGENTS.—The surgical, like the medical, student should be provided with a tray, containing a spirit lamp, urinometer, test papers, test tubes, precipitating glasses, pipettes, thermometer, glass rods, watch glasses, &c.;

small bottles, containing the nitric, acetic, hydrochloric, and sulphuric acids, solutions of potash, ammonia, nitrate of barytes, nitrate of silver, oxalate of ammonia; alcohol and rectified ether. Chemical tests are of especial use, as supplementary to microscopic investigation, in detecting in the urine albumen, bile, sugar, and chlorides.

SPECULA.—The *aural* speculum is a silver tube, of various sizes. Mr. Toynbee's are oval—the form best adopted to the formation of the external meatus of the ear. They should be inserted with gentleness in a direction forwards and inwards. The student should carefully avoid the expanding speculum, first, because the meatus does not expand, and secondly, because two blades reflect the light less perfectly than a tube. The ophthalmoscope may be used with the aural speculum.

The *vaginal* speculum is used in a variety of forms. The direction of the axis of the pelvis must be remembered in introducing this instrument. Its chief surgical use is to ascertain the condition of the vaginal wall as regards the existence of vesico or recto vaginal fistula, morbid growths, &c.

The *rectal* speculum is a tube with an interval at the side. Much pain frequently attends the use of this instrument. It may be advisable under certain circumstances to administer chloroform before the introduction of either the rectal or vaginal speculum.

SOUNDS.—The term “sound” is applied to steel instruments, of various curves, which are introduced into the bladder, for the purpose of determining the presence or absence of a calculus. It should be warmed, oiled, and introduced into the urethra, in the same manner as the bougie or catheter. Some remarks will be made on the mode of introducing instruments into the bladder, when the urethral bougie is considered. The sound should be made to traverse the whole of the bladder—the vesical hollow behind the prostate by raising, the region behind the pubes, by depressing the exploring instrument. It is advantageous to “sound” the bladder when it contains a few ounces of fluid. Mr. Erichsen’s hollow sound, which permits of the injection of warm water, is a useful instrument. If injection be resorted to, four or five ounces of warm water should be very slowly introduced. The grating and the click

must be compared with the peculiar impression communicated to the instrument by roughened surfaces and morbid growths. The recumbent position, with the shoulders elevated and the legs raised, is the best for sounding; but it may be necessary to place the patient in the erect or various other attitudes.

BOUGIES.—The *æso^dphagus* bougie is an instrument which may frequently be required for purposes of diagnosis, as in cases of suspected stricture or foreign body. An ordinary gum elastic instrument may be used, which, like the tube of a stomach pump, is pushed far back against the posterior wall of the pharynx before it is allowed to descend. The exact site and extent of a stricture would be more delicately appreciated by a ball-pointed probe. Great force or dilatation should never be resorted to.

The *rectum* bougie is less frequently required for the simple object of obtaining information, than any other bougie, as almost all affections of the rectum—strictures included—are within reach of the finger. Whether used for diagnostic or remedial purposes, forcible dilatation must never attend the introduction of an instrument.

The *urethra* bougie is an instrument con-

stantly required; and to the skilful use of which, too much attention cannot be given. The recumbent position, with the shoulders and legs elevated, is the best for the patient when *any* instrument is passed into the urethra. The best bougie is a metallie one, which should be warmed and oiled before use. The curve should describe the segment of a circle whose diameter is three inches and a quarter, the axis of the point being at right angles with the axis of the shaft. It is introduced in the following manner: the shaft, lightly held with two fingers and thumb, is placed parallel with the groin, while the point is passed four or five inches into the urethra, the shaft is then carried upwards and inwards so as to lie over and near the linea alba, the point now passes through the aperture in the triangular ligament and the shaft is immediately depressed, so that the point may pass through the membranes and prostatic portions of the urethra. It is advantageous to keep the beak of the instrument against the upper part of the canal, the obstructions being chiefly at the floor and sides.

The student should adopt one method, and practise it as frequently as possible on the dead

subject. The method known as the *tour de maitre* he should learn only to avoid. Where a stricture is suspected, a large bougie should be selected; smaller ones being taken subsequently, if required. For the estimation of the extent of the strictured portion, and for the detection of more strictures than one, a bulbous olive-shaped point may be used, the shaft being either straight or curved.

PROBES.—Probes, of silver or gold, are in constant requisition. They must be of every size—from that fitted to trace a bullet, to that which may detect a stricture in the *canaliculus lachrymarum*. The ordinary probe is used to ascertain the extent and direction of wounds, the presence of foreign bodies, the direction and communications of sinuses, and the condition of bones. A few surgeons introduce—or attempt to introduce—a probe into the *Eustachian tube*; a probe, with the end slightly bent, is introduced along the floor of the nose until it is supposed to be near the trumpet-shaped aperture of the Eustachian canal, which is parallel with and behind the middle meatus when the point is directed upwards and outwards and backwards. This

proceeding is certainly unnecessary for diagnostic purposes; and I may state, parenthetically, that many surgeons consider it indefeasible as a remedial measure. The introduction of a probe into the nasal duct from the nostril is also a remedial measure, and hence does not claim attention here. The introduction of a slender probe into the lachrymal puncta and canaliculi is a valuable diagnostic means. The anatomy of the parts must suggest the method of using the instrument.

THE EXPLORING NEEDLE.—The use of this instrument is a *questio vexata* in surgery, but most surgeons would agree that the too sparing is preferable to the too free use of an instrument which might aid in the diagnosis of a few cases and do harm in others. It may be used in doubtful abscesses, acute, chronic, or pyæmic; in doubtful suppuration in cavities—as of the chest and joints; in enlargements, doubtfully cystic, from hydatids, or arising from extravasated blood. It should never be used in enlargements which may possibly be due to the dilatation of an artery or a vein, or the displacement of a structure—as the bowel, bladder, testicle.

CHAPTER VI.

THE POST MORTEM EXAMINATION OF SURGICAL
CASES.

The ample directions given for the examination of the dead body in the work entitled, *What to Observe*, published by the London Medical Society of Observation, and in other works, render it unnecessary to give any detailed method here. A few suggestions to the surgical student shall suffice. It should ever be clearly remembered that in every surgical case, of whatever character, the examination of the cavities—their walls and contents—should be as minute as if the case were a medical one. In other words, to a careful investigation of the exterior of the body, of the cavities of the skull, thorax, abdomen, and pelvis—the walls and contents

of each—and of the neck and spine if necessary, there should be added a detailed account of any, so-called, surgical appearances, whether implicating one, more, or all of the following structures: the bones, the joint structures, the muscles, the vessels and lymphatics, the nerves, the organs of special sense, and the generative organs. Here, as everywhere in surgery, a thorough knowledge of anatomy is indispensable. Diseased structures and fluids suggest the use of the microscope and chemical reagents in every possible opportunity. The work above-mentioned contains much that the student will find valuable in the examination of cases that have a legal hearing. The necessity and the advantage of taking full notes of *post mortem* examinations cannot be too highly estimated.

CHAPTER VII.

ANALYTICAL ESTIMATION OF SURGICAL SYMPTOMS.

PAIN.—This symptom may be the result of inflammatory, nervous, cancerous, and mechanical causes. When inflammatory, other signs of inflammation are present, and it is increased by pressure. Nervous pain is capricious, increased when attention is paid to it, and is relieved by pressure and stimulants. The pain of cancer is usually of a dull aching or of a lancinating character. By mechanical pain is meant the pain which arises from stretching, or other injuries to nerves: witness the pressure of an aneurism, a dislocated or a fractured bone. Extreme pain is a valuable indication in diagnosing the following affections: acute abscess, especially when confined by dense, un-

yielding structures; phagedæna; painful subcutaneous tubercle; inflammation and suppuration of bone; onychia; inflammation of the external meatus auditorius, the membrana tympani, and the tympanum; stricture and cancer of the rectum, and fissure of the anus (during defæcation); stone in the bladder (after micturition); gonorrhœa; inflammation and cancer of the prostate gland (during micturition); loose cartilage in a joint (suddenly, during walking). Pain of moderate or slight degree is found in the great majority of affections, idiopathic or traumatic.

TENDERNESS ON PRESSURE to an extreme degree, is found in acute abscess, inflamed ulcer, acute synovitis, arthritis, ulceration of cartilages, ingrowing of the nail, acute osteitis, caries of the vertebra, and acute orchitis. More or less of tenderness on pressure is found in almost all inflammatory affections and in injuries. Usually, no tenderness accompanies the pain of cancer or neuralgia.

ENLARGEMENT is present in a large number of affections: abscess, acute and chronic; erysipelas; hypertrophy generally; tumours, viz., the fatty, fibro-cellular, painful subcutaneous,

fibrous, fibro-nucleated, fibro-plastic, recurring fibroid, cartilaginous, osseous, cystic, epithelial, and cancerous; polypi; warts; corns; boils; carbuncles; periostitis; osteitis, acute and chronic; suppuration and abscess of bone; spina bifida; synovitis; arthritis; bursitis; ganglion; aneurism; nævus; varix; arteritis; phlebitis; phlebolites; phlegmasia alba dolens; inflammation of the lymphatics and lymphatic glands; neuroma; hordeolum; ophthalmia; pterygium; staphyloma of the cornea or sclerotic; ranula; cancrum oris; inflammation, syphilitic ulceration, and epithelioma of the tongue; tonsillitis; hernia of the brain, lung, bowel, bladder, or testis; hæmorrhoids; prolapse of the tongue, rectum, bladder, vagina, or uterus; inflammation, abscess, hypertrophy, and cancer of the prostate gland; extravasation of urine; malposition and inflammation of the testis; hydrocele; hæmatocele; varicocele; epithelioma, œdema, and erysipelas of the scrotum; abscess, hypertrophy, and tumours of the breast. In injuries, enlargements may result from displacement of parts, inflammatory swelling, and extravasation of blood.

DIMINUTION IN SIZE is indicative of atrophy,

or it may occur from direct loss of substance from injury, ulceration, sloughing, or gangrene. The atrophied form of diminution may be found in the bones, muscles, eyes, and testes.

SOFTNESS is characteristic of œdema, such, for instance, as occurs in the vicinity of acute abscess; of the cellulo-cutaneous and cellular forms of erysipelas; of nævus; of the fatty and fibro-cellular tumours and certain polypi. The varied forms of encephaloid cancer are soft and also elastic; chronic abscess and spina bifida (in the horizontal position) are soft and also more or less fluctuating; hernia is soft and elastic in enterocoele, soft and doughy in epiplocele. In varicocoele, the veins, though cord-like, are soft.

HARDNESS, to a very marked degree, is found in certain forms of abscess; the margins of indolent ulcers; in phlegmasia alba dolens; at the base of the Hunterian chancre; in muscles when undergoing tetanic spasm; in painful sub-cutaneous, fibrous, neuromatus, fibro-nucleated, recurring fibroid, cartilaginous, osseous, epithelial, and scirrhus tumours; in most tumours connected with bone; in chronic and strumous orchitis; in indolent hæmorrhoids. In fractures

and dislocations the positions and the form of the bones will be distinguished by characteristic hardness. Spina bifida is hard in the upright position.

ELASTICITY is a feature of cystic growths; the fibro-cellular and encephaloid tumours are elastic and soft; enchondroma, which may be hard or soft, is also elastic; hydrocele, encysted hydrocele, hydrocele of the cord are elastic and fluctuating; hæmatocele affords semi-elastic resistance; bronchocele is soft and elastic.

FLUCTUATION is perceived to a greater or less extent in abscess, acute and chronic; in cystic growths; in spina bifida; in synovitis; in the suppurative stage of arthritic inflammations; in bursitis; in ganglion; in hydrocele, in cystic hydrocele, and hydrocele of the cord.

✓ PULSATION may be detected in abscesses and tumours seated over large arteries, in which cases it is directed forwards; occasionally the circulation of encephaloid growth is so active as to yield a pulsatory action; in osteo-aneurism the spot at which pulsation is felt is surrounded by a hard bony margin; pulsation is preëminently the symptom of aneurism—

true, false, diffused, or varicose when it is equally diffused; in aneurismal varix the pulsation is of a peculiar jarring or vibratory character; in nævus, too, the pulsation is most frequently a vibratory thrill. A throbbing sensation is frequently experienced by the patient in the progress of acute inflammation, especially when such inflammation is about to assume the suppurative form.

VIBRATION.—A vibratory sensation is frequently associated with pulsation. In diffused aneurism, aneurismal varix, and nævus vibration only is frequently detected.

FRAGILITY is found in atrophy of the bones, in mollithes ossium, and in the thin plates covering tumours connected with bone. Fragility may also be predicated of soft parts when in a state of sphacelus—witness, the gangrenous bowel resulting from strangulated hernia.

CREPITATION on pressure is remarked in sphacelus; an analagous sensation is occasionally experienced in firmly pressing a ganglion.

CREPITUS is a phenomenon elicited when a sound strikes a stone in the bladder or urethra,

when two rough surfaces of bone come together, as in fracture, and in joints after the destruction of the cartilage. A peculiar "grating" sensation may be detected in a joint affected with chronic rheumatic arthritis; also, when a sound passes over ulcerated, epithelial, cancerous, or phosphatic surfaces; and under certain circumstances when a tendon moves in its synovial sheath.

BRUIT DE SOUFFLET may be heard by the ear, directly, or by the stethoscope, in aneurism, whether diffused, or false, or varicose; in varicose aneurism the bruit is accompanied by a peculiar "whizzing" sound, resulting from the communication of the vein with the tumour; in aneurismal varix there is a blowing or hissing bruit; in nævus there is a loud humming bruit; a bruit de soufflet may occasionally be heard in very vascular tumours, particularly in encephaloma. Pressure with the stethoscope on a superficial artery will produce a bruit. A whistling sound is caused by a foreign body in the trachea or bronchi.

ADHESION not infrequently occurs when two ulcerated surfaces are maintained in apposition — thus, the fingers or toes may become

adherent to each other; the eyelids may become united (ancylobletharon), or the eyelid may be united to the eyeball (symbletharon); adhesions may form between the structures adjacent to a joint which has suffered from inflammation; the sides of an artery or a vein may adhere from inflammatory causes; in iritis, the iris may become adherent to the lens (synechia posterior), or to the cornea (synechia anterior). Among tumours, the cancerous are especially prone to form adhesions to surrounding structures.

DEFORMITY obtains its chief value as a symptom in fractures and dislocations. If deformity were synonymous with altered form, then, indeed, there were few surgical maladies free from it; but in surgical phraseology the term "deformity" has an arbitrary use, and is applied to curvatures of the spine, bent or mis-shapen bones, the various forms of talipes, flat-foot, knock-knee, contracted joints, strabismus, torticollis, hare-lip, epispadias, hypospadias, and congenital phymosis.

PYREXIA is a term used in these pages to denote a so-called febrile condition, in which a hot skin, thirst, furred tongue, and a rapid

pulse are the prominent features; it inaugurates most inflammatory and suppurative processes, as abscess, sloughing ulcer, phagedæna, erysipelas, pyæmia, syphilis, acute inflammation and suppuration of bone; it is also found in acute synovitis, and acute arthritis; in inflammation of the arteries and veins; in the acute ophthalmias, corneitis, sclerotitis, iritis, retinitis; in inflammation of the varied structures of the ear; in glossitis, tonsillitis, and laryngitis; in acute cystitis, inflammation of the prostate gland, extravasation of urine, urethral abscess, and orchitis. In the severer inflammations and those attended with the formation of pus, rigors are frequently associated with what is here called pyrexia.

DISCOLOURATION. — In acute abscess the integument is red, of a bright, dull, or bluish tinge; in the healing ulcer the granulations are red, in the weak, pale, and in the inflamed of a claret colour; the surface of sloughing, phagedænic, and sloughing phagedænic ulcers is grey, or green, or yellow, or brown; in gangrene the parts affected are of a purple, blue, brown, or black colour; in lupus the redness is bright and shining; syphilitic ulcerations and erup-

tions are of a coppery hue ; in cutaneous erysipelas there is a bright scarlet hue, a deeper red marks the cellulose-cutaneous form, and in cellular erysipelas the redness is slight or mottled ; in pyæmia the skin is sallow or of a leaden colour ; in cancer, sallow ; in scrofula, either very pink and transparent or very darkly sallow ; the skin covering a boil is of a dark red, and that covering a carbuncle of a claret colour ; the skin is red in acute inflammation of periosteum and bone, in acute synovitis, and in acute orchitis ; when bone dies it is, presuming it to be visible, at first white, afterwards dark brown or black ; nævus presents a bright, dusky, or livid redness ; in phlegmasia alba dolens the skin is white ; the margin of the eyelids is red in ophthalmia tarsi ; in the ophthalmias the conjunctiva is of a bright diffused redness ; in sclerotitis there is a pink zone around the cornea, a similar zone accompanies most of the deeper seated ocular inflammations ; in onyx and hypopyon there is a yellow appearance at the lower margin of the cornea, which is more deeply seated in the latter than in the former ; in staphyloma of the cornea the colour is white finely mottled

with black; in *arcus senilis* there is a white circle at the margin of the cornea; frequently after the external inflammations of the eye the whiteness of the sclerotic appears to encroach upon the cornea at its upper and lower margins; in *iritis* the iris undergoes important changes in colour, the dark becoming reddish, the blue and grey becoming green; in *cataract* there is a white opacity behind the pupil, and, in the same spot, in *glaucoma* a greenish or greyish drab tint; in inflammation of the *membrana tympani* the membrane is dull and opaque or, perhaps, of a reddish colour; in throat deafness there is very dark redness of the fauces and tonsils; indolent piles are of a dark dull blue colour, an inflamed pile is red; in extravasation of urine red patches appear in the skin of the perineum, scrotum, and groins, which are followed by black spots; *ecchymosis* (from injury) is evidenced by a succession of the following colours—dark red, black, purple, green, and yellow.

TRANSPARENCY AND OPACITY.—In *hydrocele*, *hydrocele* of the cord, and *encysted hydrocele* some degree of transparency is evident by transmitted light. There is more or less of

opacity in corneitis, pannus, nebula, albugo, leucoma, and staphyloma of the cornea; the semi-transparency of the membrane tympani is impaired by inflammation.

TEMPERATURE, INCREASED OR DIMINISHED.—The temperature is increased in abscess; in inflamed ulcer; in commencing erysipelas; in acute inflammation of any structure. The temperature is diminished in those parts where the circulation is feeble from any cause whatever, and in sphacelus where the circulation has ceased altogether.

DISCHARGES.—The discharge from an ordinary acute abscess is of healthy cream-like pus; from a chronic abscess the purulent discharge consists of two portions, one thin and watery, the other indurated and in masses; occasionally the pus is of a pink colour; the discharge from a healing ulcer is healthy pus, that from an indolent ulcer is thin and watery, that from an inflamed ulcer is thin, dark, and copious; the discharge from a varicose ulcer is variable, that from the vicarious ulcer is red at the catamenial periods; the discharge from phagedæna is thin, red, and occasionally copious; the discharges from erysipelas are of a varied purulent

character as the progress is healthy or unhealthy; the discharge from an indurated chancre is scanty and lymphic, from a simple chancre, ordinary pus; the discharges from cystic growths are of very variable colour and consistence; the discharge from cancerous growths is thin, watery, and mixed with debris; in abscesses connected with bone there is frequently a copious discharge of a serous-looking fluid, though such an abscess when first opened usually contains ordinary pus; synovial fluid occasionally flows from wounds or fistulæ connected with joints; from acute and chronic ophthalmia the discharge is thin and muco-purulent; from the purulent and gonorrhœal ophthalmia, and the ophthalmia of infants the discharge is of ordinary pus; from fistulæ connected with salivary ducts or glands there is a discharge of saliva; from fistulæ connected with the bladder or urethra there is a discharge of urine; from wounds or fistulæ connected with the intestinal canal there may be a discharge of fæces; discharge of blood from the rectum may result from piles, ulceration, extreme congestion of the mucous lining, or cancer, which hæmorrhage will *follow* the evacuation of fæces; a discharge of pus and blood from the urethra may

arise from "stricture," or abscess, or ulceration in the vicinity of the urethra or bladder; in cancer of the prostate there will be the usual cancerous discharge from the urethra, which, like other discharges from that canal, will follow micturition; in gonorrhœa the discharge is at first thin and serous, then of thick and afterwards of thin pus; the pus from a urethral or prostatic abscess is frequently of a dark foetid character; the discharge from a hydrocele resembles serum, that from hydrocele of the cord and encysted hydrocele is white and slightly opalescent.

IMPAIRED MOBILITY may be the result of paralysis, from injury or disease of the nerves or nerve centres; or from diseases or injuries of, or in the vicinity of the joints; or from extensive injury of the muscles, or fractures of the bones; contraction of the muscles, congenital or acquired, may also impede the motion of a part. When lameness occurs from paralysis there is dragging of the limb; in inflammatory affections of the joint there is limping of such character as shall ensure the least possible amount of motion; in chronic rheumatic arthritis there is limited motion, thus, when the hip is affected

the patient takes very short steps; in the lameness associated with psoas abscess the trunk is bent forwards, and the patient finds it impossible to hop on the affected side.

LACHRYMATION may be due to closure of the lachrymal puncta or the nasal duct (*stillicidum lachrymarum*), simple over-abundance of tears is called *epithora*. Lachrymation is a symptom found in inflammation of the conjunctiva, cornea, and sclerotica.

INTOLERANCE OF LIGHT is more or less marked in the ophthalmias, it is a very marked symptom of strumous ophthalmia; it is found in keratitis, scleritis, some forms of amaurosis, and weak sight.

EMACIATION may be the result of almost every malady, which is associated with pain, loss of sleep, or discharge, or want of appetite.

FALLING OFF OF THE HAIRS may indicate debility, hereditary disposition, or syphilitic taint.

THE PULSE is accelerated in those states of the system in which pyrexia is found.—(See Pyrexia.)

HÆMORRHAGE when of a jerking character is arterial—venous hæmorrhage is in a smooth

continuous stream ; in the former, the blood is of a bright red, in the latter of a dark colour. Hæmorrhage may occur from varicose and vicarious ulcers, from the separation of a slough, from the bursting of an aneurism, or nævus, or varix ; it may be mixed with the discharge of a cancer. Copious hæmorrhage is frequent in encephaloma, thereby constituting fungus hæmatodes. Hæmorrhage most frequently occurs from injuries of the arteries and veins.

DELIRIUM.—For this and other symptoms connected with the nervous system, see the paragraphs on shock, traumatic delirium, injuries of the cerebro-spinal system, tetanus, hydrophobia. Delirium may occur in the course of high inflammatory or low depressing affections, as acute abscess, acute inflammation of bone, acute synovitis, acute architis ; in pyæmia, erysipelas, carbuncle, extravasation of urine, and urethral abscess.

THIRST AND HEAT OF SKIN.—(See Pyrexia.)

VOMITING, NAUSEA, ANOREXIA, with flatulence and eructation, find their chief surgical value as indications of intestinal obstruction from hernia, &c. Vomiting occasionally occurs in

the course of acute inflammations, as, for instance, in acute inflammation of the testis or brain; after operations; in pyæmia; in affections of the œsophagus. Vomiting from obstruction becomes of a stercoraceous character; it is frequently allied with singultus.

CONSTIPATION, surgically considered, is found chiefly in affections of the rectum and anus, namely, stricture, cancer, and ulcer of the rectum, in hæmorrhoids, fissure and cancer of the anus, in which cases it frequently alternates with diarrhœa. It is frequently associated with pyrexia. In diseases of the rectum, defæcation is also difficult and painful. In strictures, the fæces are flattened.

DIARRHŒA.—(See Constipation.)

INTESTINAL OBSTRUCTION occurs in strangulated hernia, in internal hernia, in invagination, from the presence of a twist in the bowel, from the constriction of the bowel by fibrous bands, from the presence of foreign bodies in the canal, in spasm, in inflammation, in stricture—simple or cancerous—of the rectum, and in imperforate anus.

COUGH. EXPECTORATION. DYSPNŒA.—Cough, as a surgical symptom, is of a spasmodic and

suffocative character, and is present in affections of the larynx, as laryngitis, ulceration of the larynx, polypus of the larynx, and foreign body in the larynx. *Dyspnœa* and expectoration arise from the same causes. The *expectoration* from ulceration—syphilitic or tubercular—is purulent or even bloody. Stertorous breathing indicates cerebral disturbance, as compression, &c.

DIFFICULT MICTURITION, which is also painful, is present in acute inflammation of the bladder, in inflammation, abscess, hypertrophy, cancer, and calculus of the prostate gland; in gonorrhœa, urethritis, urethral abscess, stricture of the urethra—spasmodic, organic, or inflammatory. In vesical calculus micturition is interrupted and followed by pain. ✓

FREQUENT MICTURITION is indicative of acute and chronic inflammation of the bladder, of tumours and calculus in the bladder, of inflammation of the prostate gland. When frequent micturition occurs in gonorrhœa it is presumed that the gonorrhœal inflammation has implicated the bladder. “Dribbling” is a symptom of retention and paralysis of the neck or more of the bladder.

RETENTION OF THE URINE may be the result of the various forms of stricture of the urethra ; of enlargement of the prostate gland ; of paralysis of the bladder ; of foreign bodies or tumours within or adjacent to the urethra or bladder.

DISEASED STATES OF THE URINE have no bearings that are not medical as well as surgical. The student should not only consult authors, but, with the assistance of the microscope, familiarise himself with the detection of pus, blood, epithelium, tube casts, lithic acid, oxalate of lime, and the phosphates.

CHAPTER VIII.

SYNTHETIC ESTIMATION OF SURGICAL PHENOMENA.

DISEASES NOT CONFINED TO ANY PARTICULAR
ANATOMICAL SYSTEM.

ACUTE ABSCESS.—Pain—acute or throbbing, or tensive, or heavy ; tender on pressure ; redness—bright, dull, dusky, or bluish ; swelling—fluctuating in centre, hard immediately around the centre, œdematous in the vicinity ; rigors ; pyrexia ; perspiration ; diarrhœa ; sleeplessness ; delirium.

CHRONIC ABSCESS.—Swelling ; fluctuation ; probable history of diseased bone ; no pain, or hardness, or redness, unless at termination. The cold and diffused abscesses involve differences of pathology chiefly.

HEALING ULCER.—No pain ; granulations small, conical, and red ; pus moderate in

quantity, of a healthy character; margins level with granulations, smooth, semi-transparent, bluish.

INDOLENT ULCER.—No pain; no granulations; surface smooth, glassy, and grey; margins elevated, white, hard, insensible; pus thin and scanty.

WEAK ULCER.—No pain; granulations large, tall, projecting beyond margin, pale, insensible; margin abrupt.

INFLAMED ULCER.—Marked pain; extreme tenderness; granulations minute and deeply red; pus thin and copious.

VARICOSE ULCER.—Marked pain; oval form; several in number; granulations variable or absent; enlarged veins in vicinity; occasional venous hæmorrhage.

VICARIOUS ULCER.—An ulcer or a wound, of variable character, which exudes a red fluid at the catamenial periods.

SLOUGHING ULCER.—Pain; heat; surrounding redness; greyish, or greenish, or yellowish, or brownish appearance of surface; sharply defined edges; rapid increase of size; pyrexia.

PHAGEDÆNA.—Great pain; very irregular surface; light grey colour; rapid increase of

size; adjacent parts swelled and duskily red; discharge serous, red, occasionally copious; restlessness; diarrhœa; thirst.

SLoughING PHAGEDÆNA.—The symptoms of slough and phagedæna combined. †

GANGRENE.—Cessation of pain and tenderness; insensibility; coldness; colour purple, blue, brown, or black; crepitation under the finger; cuticle loses its adhesion to the cutis; vesicles, if present, are moveable; a peculiar odour.

ONYCHIA.—Pain; ulceration at the root or side of the nail; heat; redness; swelling; pus from under the nail; granulations, large and weak; nail shrinks and changes colour to brown or black; comes off.

PARONYCHIA.—Symptoms, those of an abscess of the fingers; usually situated over the last phalanx.

BOIL.—Enlargement, circumscribed, circular and conical; pain; dark red colour; central slough; frequently multiple and successive; occur in all ages, mostly in the young; seated chiefly at back of neck and trunk.

CARBUNCLE. — Enlargement, circumscribed, quite flat; tense pain; claret colour; several small sloughs; scanty discharge; cachexia;

† Carbuncle is a collection of boils, or a single boil, which is a collection of abscesses, and is a collection of abscesses, and is a collection of abscesses.

after middle age; almost always at posterior aspect of neck and trunk.

LUPUS NON EXEDENS. — Redness, smooth, shining, covered with minute scales of desquamating cuticle; a crack, or excoriation, or ulcer, or scab; ulceration superficial, spreading in one direction, healing in another.

LUPUS EXEDENS. — A red, smooth, circumscribed, shining swelling; a fissure; ulceration persistent, increasing, destroying every structure, of irregular glossy surface, and without granulations; adjacent tissues healthy. Face chiefly attacked, as nose or cheek.

CUTANEOUS ERYSIPELAS. — Rigors; pyrexia; bright redness, which is pale for a moment after pressure; burning pain; sensation of stiffness; slight swelling; occasionally vesicles or abscesses; if a wound be affected the discharge dries up.

CELLULO-CUTANEOUS ERYSIPELAS. — Rigors; severe pyrexia; deep redness, partially diminished by pressure, the deeper redness reappearing slowly; pain, burning and throbbing; "pitting" on pressure; extreme swelling; sense of resist-

ance to finger, tense, brawny, boggy, fluctuating, or flaccid; vesications; lividity; sloughing.

CELLULAR ERYSIPELAS. — Rigors; pyrexia; redness absent, or slight, or mottled; severe pain, burning, throbbing, or tensive; great swelling; tension; boggiess; fluctuation; sloughing; prostration; anxiety; delirium.

PYÆMIA.—Rigors; pyrexia; anxiety; cardiac oppression; pain in the head; sleeplessness; delirium; sallow skin; excessive perspiration; furunculi; erysipeloid eruptions; nausea, vomiting, purging: add to these the symptoms of low inflammation, collections of matter, or gangrene in any organ or part.

PRIMARY SYPHILIS. — Ulcers (chancres) on the genitals appearing about the fifth day after infection; difficult to heal; average duration, four weeks; innoculability—positively, but not negatively, valuable. A chancre may be simple, suppurative, or indurated, that is, with a hard base, or it may be attacked with sloughing, phagedæna, or both. *The simple chancre*: a sore with a yellowish surface; shallow; with

sharply defined edges, which latter are marked with a narrow blush; occasionally tall granulations; suppuration; irritability. *The indurated chancre*: a sore deeply and cleanly cut, with an indurated base, and greyish, sloughy surface; scanty lymph-like discharge; edges elevated, hard, and of purplish hue. The characters of the sloughing and phagedænic chancres will be sufficiently indicated by their designations. *Acute bubo*: enlargement of a single gland above Poupart's ligament; formation of an acute abscess in its centre; innocuability by pus from centre; after bursting, everted, copper coloured, and ragged edges. *Chronic bubo*: a strumous or cachectic habit; enlargement of several glands; suppuration between integument and glands.

SECONDARY SYPHILIS.—Symptoms occur from two or three weeks to several months after the primary. Cachexia; rheumatic pains; cutaneous eruptions—stains, pimples, scales, blebs, pustules, tubercles, condylomata; falling off of the hair; ulcers of the throat, nose, palate, or larynx; enlargements (nodes), inflammation, and ulceration of the bones—particularly of the tibia, clavicle, and ulna.

TETANUS.—Spasmodic and painful contraction of muscles commencing in those of the face and in those of deglutition and respiration ; difficulty in opening the mouth (trismus) and swallowing ; heat of surface and perspiration ; contraction of muscles of mouth (risus sardonius) ; contraction of trunk and extremities — the trunk may be curved backwards (opisthotonos), or forwards (emprosthotonos), or on one side (pleurosthotonos). There are intervals of partial cessation of contraction occasionally, and more complete cessation for short periods during sleep. Muscles of abdomen hard ; obstinate constipation ; micturition occasionally difficult. Mental efforts, contact of external bodies, currents of air, and attempts to swallow, increase or bring on the morbid muscular action. The pulse may be accelerated ; the intellect remains clear.

HYDROPHOBIA.—At an uncertain period after infection, ordinarily from six weeks to three months (the minimum and maximum periods are uncertain), there is pain and, possibly, redness or swelling or suppuration in the cicatrix. After a few days of discomfort, vertigo, alternate heat and cold, despondency, and occasionally vomiting and pyrexia, there follow great diffi-

culty of swallowing and respiration ; horror of fluids from a vivid conception of the difficulty of swallowing ; viscid mucus of mouth and fauces ; hawking and spitting ; convulsions of the muscular system ; occasionally sudden inspiratory efforts (from contraction of diaphragm) ; great excitability of surface of body ; extreme terror ; despair ; delirium.

FATTY TUMOUR.—Absence of pain ; soft ; lobulated, oval, or round ; inelastic ; doughy ; slowly growing ; usually seated at the back of the neck or shoulders, but it may be found among muscles, under fasciæ, near serous cavities and joints ; it occasionally glides from one spot to another.

FIBRO-CELLULAR TUMOUR.—Absence of pain ; soft ; elastic ; smooth ; rather rapid in growth ; are partial to sites naturally devoid of fat, as the eyelid, scrotum, scalp, by the side of the vagina, and in the deeper intermuscular spaces. This structure constitutes the soft polypi, hypertrophy of the clitoris, or nymphæ, condylomata, and certain warts.

PAINFUL SUBCUTANEOUS TUMOUR.—A small tumour under the skin, which latter may be

adherent, or red, or smooth, or full of large and tortuous vessels; the tumour is small—not commonly larger than a coffee berry, and frequently less; firm, hard, and elastic; intense intermittent pain; tenderness on pressure is extreme; mostly single; of five cases, four occur in the female; they may be found in any part of the body, but chiefly in the lower extremity, and are very rare in the face. This tumour is sometimes spoken of as a neuroma, but most surgeons consider the neuromatous tumour to be a fibrous enlargement developed within the neurilemma—painless, and frequently multiple.

FIBROUS TUMOUR.—No pain or tenderness; oval, round, or slightly lobulated, yet smooth; hard—the hardness being equal; slowly growing; single; may attain a large size; occur in the neck, parotid gland, antrum, uterus, jaws, vicinity of joints, and subcutaneous cellular tissue generally.

FIBRO-NUCLEATED TUMOUR possesses the outward character of the fibrous tumour, but with a tendency to return after removal; no disposition to invade the lymphatics. Its chief peculiarities are pathological, which may not be considered here.

FIBRO-PLASTIC TUMOUR (*Myeloid*).—Painless; smooth; globular and lobulated; slowly growing; single; may attain enormous size; occurs at any age; occasionally connected with inflammatory symptoms, at other times with secondary syphilis; tendency to return. It is round, or oval, when enclosed in bone. It is found chiefly in connection with bones, especially the maxillæ; more rarely in the mammary or other glands, and the cutaneous structures.

RECURRING FIBROID TUMOUR possesses the general characters of the fibrous tumour. The name of the growth indicates its chief peculiarity—recurrence.

CARTILAGINOUS TUMOUR.—Of variable resistance, from extreme softness to extreme hardness; firm, smooth, perhaps slightly lobular; frequently multiple; occurs most frequently in connection with bones, particularly those of the hand; it is external to the longer and within the shorter bones; less frequently it occurs in the testis, the mammary and parotid glands, the subcutaneous cellular tissue (where it is softer) and the lungs. Usually it does not tend to recur after removal.

CYSTIC TUMOURS are moveable, elastic, semi-

fluctuating, firm, of a round form; very slowly growing; size, from a pin's head to an orange; occur chiefly in the head and back. The surgical student will note many interesting pathological varieties.

EPITHELIOMA occurs on the cutaneous, mucous and muco-cutaneous surfaces; at first a wart, or tubercle, or scab; ulceration—deep, irregular, destroying all textures; induration and warty growths at the margin; thin watery discharge; invasion of neighbouring lymphatics; occurs in the lip, cheek, tongue, scrotum, anus, &c.

CANCER.—Pain of a lancinating or rheumatic character; great irregularity of surface, nodulation, branching; various degrees of resisting power from the very soft to the very hard, and single tumours present very unequal resistance; progress continuous and rapid; adhesion to and infiltration of adjacent structures; inveterate and foul ulceration; thin discharge; invasion of neighbouring lymphatics; cachexia; secondary deposits in distant parts; tendency to recur after removal. *Scirrhus* is the hard variety of cancer. *Encephaloma*—soft or medullary cancer is very rapid in growth; very soft and elastic,

but not fluctuating; after the integuments have ulcerated, fungous masses protrude. Encephaloma attended with hæmorrhage is called *Fungus Hæmatodes*; when infiltrated with pigmentary matter *Melanosis*. *Colloid*, or the gelatiniform variety of cancer, is rare.

SURGICAL AFFECTIONS OF THE INTEGUMENTARY
SYSTEM.

WARTS.—There are two principal varieties: the small, hard, dry, rough wart, occurring in the hands, face, &c. The soft, moist, pale, or vascular, occurring in the more perspirable regions.

CORNS.—Small, hard, dry enlargements of cuticle occurring in parts subject to friction. Between the toes the soft wart is occasionally called a soft corn.

CHELOID TUMOUR.—Enlargement in the true skin; flat, ovoid, or circular; pale red colour; possibly ulceration and hæmorrhage; partial to cicatrices; tends to recur after removal.

INGROWING OF THE NAIL.—Ulceration at side of nail; suppuration, more or less; sensitive granulations.

WEBBED FINGERS AND TOES.—Occasionally the finger and toes are united together by an abnormal disposition of the skin.

DISEASES OF OSSEOUS SYSTEM.

PERIOSTITIS.—Enlargement indistinctly defined; hard, puffy, doughy, semi-fluctuating; pain; adjacent integuments pale or red; occurs in slightly covered bones.

ACUTE OSTEITIS.—Rigors; pyrexia; enlargement over the affected bone; pain, worse at night; redness, perhaps œdema, of adjacent skin; suppuration, pointing at one or more spots.

CHRONIC OSTEITIS.—Slow enlargement; deep seated pain, increased at night; tenderness; sense of weight.

SUPPURATION OF BONE is simply a sequence

of acute inflammation; it may be connected with pyæmia, necrosis, caries, exfoliation, and ulceration.

ABSCCESS OF BONE.—In addition to symptoms of chronic inflammation of bone there is fixed and tensive pain occurring at one particular spot; it is also aggravated at night and tender on pressure. Abscess of *antrum*: general enlargement towards mouth, pharynx, orbit, cheek, and nose; loosening of teeth.

CARIES.—After symptoms of inflammation and suppuration of bone, chiefly its cancellous portions, and the pus has found egress by several apertures, a probe passed through one of them detects rough and yielding bone; the swelling diminishes; integuments, darkly red, around the fistulous openings; the apertures themselves filled with fungous granulations; discharge foetid and sanious.

NECROSIS.—Also preceded by symptoms of inflammation and suppuration. The external phenomena are similar to those of caries; their site, however, would probably be different, as necrosis affects the shafts of bone principally; possibly the probe might detect the dead shaft (sequestrum). *Exfoliation* signifies the death

of a portion of the surface of bone. Its exterior phenomena would resemble those of caries and necrosis.

ATROPHY OF BONE.—In old age, after fracture, from disuse, in mollities ossium and rickets; increased liability to break or bend; diminished weight, or diminished size, or diminished power.

HYPERTROPHY OF BONE.—Simple increase of size.

RICKETS occurs before puberty. Bones soft, flexible, distorted; upper part of head large, face small and triangular, the chin pointed, the upper teeth projecting; articulations appear large; the femur or tibia, on each side, curved either forwards or outwards; chest conical, small above, expanded below; perhaps lateral curvature of the spine.

MOLLITIES OSSIIUM occurs in advanced life, and chiefly in the female; vagrant pains of rheumatic, or violent character, frequently commencing in the pelvis; extreme liability of the bones to bend and break; distortion; debility, with its profuse perspiration; emaciation.

EXOSTOSIS.—Enlargement, hard, flat, convex,

or pedunculated and globular; painless, unless from pressure, which may also cause ulceration and other inconvenience.

OSTEO-ENCHONDROMA.—(See Enchondroma.)

CYSTIC TUMOURS OF BONE.—In adult age chiefly; smooth, spherical, or ovoid; slowly growing; pain slight or absent; skin not discoloured, its veins large and blue; when advanced, pressure produces a crackling sound; elasticity; obscure or complete fluctuation. They may occur in front of or within the antrum, producing enlargement in one or more directions.

OSTEO-CANCER.—In early age; occurs in upper end of tibia, lower end of femur, the humerus, and the maxillæ—particularly the antrum; enlargement, rapidly growing, acutely painful, elastic or obscurely fluctuating; perhaps pulsation, or even bruit; the adjacent integument pale at first, its veins large and tortuous, it is soon implicated; the surrounding textures are involved; invasion of the lymphatics; cachexia. There are two forms, central and peripheral—the former invading the whole length of the bone, the latter being more circumscribed. Cancer of *antrum*: rapid growth,

pain, cachexia, fungous projections through sockets of teeth, invasion of adjacent structures.

OSTEO-ANEURISM.—Occurs in the cancellous ends of bones; enlargement smooth and globular, without distinct outline; single; slowly growing; elasticity; pulsation, or a history of pulsation; bruit blowing, rasping, or absent; compression of the main artery of the limb arrests the pulsation and the bruit, and may lead to the detection of a bony margin surrounding a depression; crackling sound on pressure.

CARIES OF THE VERTEBRA (*angular curvature*).—Strumous habit; pain of a dull rheumatic character in the back, perhaps extending to the abdomen or down the thighs; great tenderness, on application of heat or pressure direct by percussion or indirect by sitting down suddenly and forcibly; feebleness and spasms of lower extremities, perhaps diminished sensibility and temperature; impaired control over sphincter ani and the muscles that *expel* the urine; gait uncertain; legs apart; abscess sooner or later; projection backwards more or less marked or absent.

PSOAS ABSCESS.—History of vertebral caries;

fluctuating enlargement below Poupart's ligament which receives an impulse from coughing, and which lessens or disappears when the patient lies down; action of the psoas muscle impaired as indicated by inability to hop on the affected side. An abscess passing along the psoas muscle may point at any part of the lower extremity. When chronic abscess from vertebral caries appears at the loin it is called *lumbar*. It must be remembered that such abscess connected with caries at various parts of the vertebral column may approach the surface at almost any part of the body, as the neck, chest, axilla, abdomen, perinæum, any part of the back of the trunk, the iliac fossa, the gluteal region, and the lower extremity generally.

LATERAL CURVATURE OF THE SPINE.—In females between ten and eighteen years. Upper part of spinal column projects in one direction, carrying the shoulder with it, and the lower projects in an opposite direction carrying with it the hip. Very commonly the upper part is directed to the right and the right shoulder projects, and the lower part to the left, the left hip projecting. Frequently, a rotatory twist accompanies the lateral. Debility; emaciation; pallor.

SPINA BIFIDA.—An enlargement over the vertebral column almost always over the upper lumbar or lower dorsal portions; congenital; deficiency of spinous processes and laminæ; size from that of a walnut to that of a foetal head; fluctuation not always distinct; the tumour is hard in the upright, soft in the vertical position; it may be lobulated; there may be more than one; integuments normal at first and congested subsequently.

DISEASES OF THE ARTICULAR SYSTEM.

ACUTE SYNOVITIS.—Pyrexia; pain in affected joint; rapid swelling soon after the pain; extreme sensitiveness, the slightest touch or motion being unbearable; the swelling is most prominent where the synovial membrane is least restrained, as the sides of the patella and the quadriceps extensor in the knee, and the sides of the olecranon in the elbow; fluctuation; semiflexion of the joint.

CHRONIC SYNOVITIS.—Swelling; fluctuation; dull pain; weakness of the joint; no tenderness

when the articular surfaces are pressed together. *Hydrarthrosis*: when all the symptoms save enlargement and fluctuation have disappeared.

ARTHRITIS.—Pyrexia; pain, acute, burning, tensive, pulsatory; extreme tenderness on pressure; swelling slight, equally over the joint, increased at night; pain and swelling chiefly at the internal or posterior aspect of the joint; integuments red; later the swelling may increase greatly; spasmodic contraction of affected limb; fluctuation; fistulous openings; discharge; the knee and elbow are partially flexed; dislocation may occur; or relaxation of ligaments, and a grating sound on motion.

STRUMOUS ARTHRITIS (arthritis occurring in a strumous habit).—Very slow progress; enlargement doughy, semielastic, uniform; pain at one spot, chiefly during motion; flexion; stiffness; integuments pale; portion of limb below the joint wasted; fluctuation; fistulous openings over the joint; discharge. When inflammatory affections of joints terminate favourably it is by the union of the articular surfaces destroying the capability of motion—ankylosis.

CHRONIC RHEUMATIC ARTHRITIS.—Rheumatic pain, worse at night; stiffness; enlargement of

the parts of the bones forming the joint; nodosities, occasionally so projecting as to impede motion, simulating ankylosis; motion becomes very limited; shortening; grating sound on motion; when the hip is affected, obliquity of the pelvis, shortening and eversion of the knee and foot; flattening of the nates; loss of the gluteal fold, the trochar becoming thicker, larger, and more prominent. When the shoulder is affected the head of the humerus may be felt nearer the acromion process; wasting of the muscles contiguous to the joint. In hip joint affection the thigh is wasted, the leg is not. When the shoulder is affected the upper-arm is wasted, the fore-arm is not.

NEURALGIA OF JOINTS.—Pain in a joint, especially the hip, knee, ankle, or shoulder; generally in the female in whom hysteria is evident; pain on the surface, not increased by pressing the articular surfaces together; intermittent; no swelling of the joint, or spasmodic contractions of the limb, or other evidence of structural disease.

LOOSE CARTILAGES IN JOINTS.—Sudden and extreme pain during exercise, producing faintness, possibly the patient may fall; occasionally

they may be felt at the surface of the joint; the pain occurs when the loose body gets between the articular surfaces. Symptoms of synovitis usually supervene. The knee is principally affected. They have been known in the elbow and temporo maxillary articulations.

MORBUS COXÆ.—*First stage*: (stage of pain) pain in the hip and the knee, both increased by motion and by pressing together the articular surfaces. (In diseases of the joints acute pain is supposed to indicate cartilaginous mischief, while in slight pain caries of the bone is considered the more prominent lesion.) Weakness; stiffness. *Second stage*: (stage of deformity) flattening of the nates; disappearance of the sulcus between the nates and thigh; lameness; lengthening, rarely shortening; eversion, rarely inversion. *Third stage*: (stage of suppuration) formation of abscess in nates, groin, or thigh, or even within the pelvis; fistulous apertures; dislocation; increased deformity, as shortening, eversion, &c.

INFLAMMATION OF BURSAE.—Pyrexia; enlargement; fluctuation; pain; redness, possibly œdema, of the skin; later, doughiness or hard-

ness; suppuration, as indicated by increased swelling, increased redness, and œdema.

BUNION.—Inflammation of an old or a new bursa in connection with the metatarso-phalangeal articulation of the great toe, where it is commonly preceded by malposition of the great toe.

GANGLION.—Fluctuation and enlargement over sheaths of muscles; stiffness of adjacent joint; crackling sensation on pressure; no pain, or integumentary redness. This term is frequently applied to non-inflammatory enlargements of bursæ, as well as muscular sheaths.

DISEASES OF THE MUSCULAR SYSTEM.

STRABISMUS (squint).—Impaired parallelism of the axes of the eyes; the cornea may approach the inner canthus (convergent strabismus), or the outer (divergent strabismus). To ascertain which eye squints, in cases of doubt, observe which is least easily applied to the vision of a distant object, or which is weakest, as tested by variously sized types.

TORTICOLLIS (wry-neck).—The head is drawn down to the shoulder; if it arises from spasm of the sterno-mastoid, the face is drawn to the affected side; if it arises from paralysis, the head will be drawn to one shoulder and the face directed to the other.

TALIPES EQUINUS.—The heel is raised; the weight of the body being supported by the toes and the metatarso-phalangeal articulations; the tendo achillis is very tense.

TALIPES CALCANEUS.—Heel depressed; toes and anterior part of foot elevated.

TALIPES VARUS.—The sole of the foot is turned inwards; the inner margin upwards; the anterior part of the foot adducted; the sole is shortened longitudinally and transversely; the weight of the body rests on the outside of the foot; a large bursa being developed over the cuboid and fourth and fifth metatarsal bones. Very frequently some degree of equinus is also present.

TALIPES VALGUS.—The sole of the foot is turned outwards, and its outer margin upwards.

FLAT-FOOT.—Entire absence of the longitudinal arch, the natural concavity at the inner side of the foot becomes convex; slight ever-

sion of the anterior part of the foot; walking difficult.

KNOCK-KNEE AND CONTRACTED JOINTS present no difficulties of diagnosis, and, therefore, need not be described ~~here~~.

DISEASES OF THE CIRCULATORY SYSTEM.

ANEURISM. — Feeling of pulsation to the patient; defined oval or round enlargement in the course of an artery; pulsation to the fingers at all the accessible surface; thrill; bruit de soufflet to the stethoscope; at an early period the tumour may be obliterated by direct pressure, or by pressure upon the artery leading to it; if pressure upon the artery be removed, the pulsation in the tumour will be *sudden* and expansive; pain; œdema in the vicinity.

DIFFUSED ANEURISM. (From injury to a vessel or bursting of a true aneurism.) Enlargement without circumscribed margin; soft; fluctuating; vibratory pulsation to the fingers and bruit to the stethoscope—the latter not in-

variably present; skin pale at first, bluish afterwards; diminished temperature and utility of affected limb.

FALSE ANEURISM (circumscribed diffused).—History of puncture or other injury to a smaller artery; enlargement of moderate size and firmness; pulsation; bruit; diminished temperature of the affected limb.

ANEURISMAL VARIX.—History of injury to an artery, which is seated near a vein; enlargement of dusky colour if near the surface, of elongated form, continuous, with large knotty tortuous veins, and disappearing on pressure applied to the artery above; artery larger above the wound than below; jarring pulsation; blowing or hissing bruit; diminished temperature, and use of the affected limb.

VARICOSE ANEURISM.—An enlargement in connection with an artery and a vein with the combined symptoms of false aneurism and aneurismal varix; enlargement circumscribed, soft, pulsating, compressible; contiguous vein dilated and tortuous; the stethoscope reveals an aneurismal bruit as well as a peculiar whizzing sound, resulting from the communication of the vein with the tumour.

ARTERITIS.—Pain, tension, and stiffness in the affected limb; there is swelling of the artery, which feels like a cord, and the vicinity of which is extremely sensitive to pain; diminished temperature and pulsation of the parts below discolouration; tendency to gangrene.

NÆVUS.—Enlargement of variable size and form; in the integument or subcutaneous structures; usual site the head and neck; doughy consistence; size reduced by pressure; vibratory thrill or pulsation; integument discoloured, red, bright, dusky, or livid; peculiar loud whizzing or humming bruit; congenital. When a nævus is large, and apparently implicating the smaller arteries rather than capillaries, it is called *aneurism by anastomosis*.

VARIX.—Veins large, tortuous, blue; pain, weight, œdema, and weakness of affected limb; generally superficial and in the lower extremity; ulceration; hæmorrhage.

PHLEBITIS.—Redness of the integument over

the vein; the vein large, hard, and knotty; pain in the limb; tenderness on pressure; abscess, possibly pyæmia.

PHLEBOLITES.—Extremely hard masses in the course of a vein following varicosity and coagulation.

PHLEGMASIA ALBA DOLENS.—Enlargement, hard, white, painful; loss of power in the limb; occurs in the puerpural condition.

INFLAMMATION OF THE LYMPHATICS. (*Angeio-leucitis.*) Red lines running towards lymphatic glands; cord-like feeling, tenderness; the glands enlarged and tender; erysipelas, œdema, or abscess may occur in the affected parts.

INFLAMMATION OF THE LYMPHATIC GLANDS. (*Adenitis.*) Enlargement; pain; tenderness; possibly pyrexia and rigors; if abscess, sloughing of integuments; discharge from cellular tissue, between the glands and the skin. In chronic inflammation the symptoms are more slowly developed, occasionally enlargement is the only symptom.

DISEASES OF NERVOUS SYSTEM.

NEUROMA.—(See remarks at the end of the paragraph on painful subcutaneous tubercle.)

NEURITIS.—Pain, tenderness, and swelling, in the course of a nerve; pain worse at night, though continuous through the day. It may be combined with an injury or with rheumatism.

NEURALGIA.—Pain, slight or extreme, in the locality of a nerve; tenderness on pressure, variable or absent; appears and disappears suddenly. If in the face, injection of the conjunctiva, and increased flow of tears and saliva; absence of symptoms of organic disease.

DISEASES OF THE EYE.

HORDEOLUM (*stye*).—The symptoms are those of a small boil on the margin of the lid.

TUMOURS OF THE LIDS are numerous, as the warty, cystic, vascular, &c., which see.

OPHTHALMIA TARSII.—Swelling, redness, and purulent discharge of the margin of the eyelids;

commences as a row of small pustules; crusts form; hairs fall out; eyelids stick together in the morning.

TRICHIASIS.—The eyelashes grow inwards and irritate the eyeball; frequently associated with ophthalmia tarsi and entropion.

ENTROPION.—The eyelid is turned inwards.

ECTROPION.—The eyelid is turned outwards.

ANCYLOBLETHARON.—The eyelids are united together.

SYMBLETHARON.—The eyelid is united to the globe.

LAGOPHTHALMOS.—Inability to close the lids.

PTOSIS.—Inability to lift the upper lid.



XEROPHTHALMIA.—Unnatural dryness of the conjunctiva.

EPIPHORA. — Increased secretion of tears which run over the cheek; patency of the puncta lachrymalia.

CLOSURE OF THE LACHRYMAL PUNCTA OR CANALICULI.—*Stillicidum lachrymarum*.

CLOSURE OF THE NASAL DUCT. — *Stillicidum lachrymarum*; weakness of the eye; dryness of the nostril on the affected side; enlargement

below the tendo oculi, which, if pressed, a peculiar fluid, partly translucent, partly opaque, oozes out at the punctum lachrymarum. Inflammation, abscess, and lachrymal fistula, with their respective symptoms, may follow obstruction of the nasal duct.

ACUTE OPHTHALMIA.—Superficial burning pain, with a feeling like that produced by a foreign body; bright, superficial redness of the conjunctiva—the injected vessels being tortuous and arranged in a network manner, the redness may be made to disappear momentarily on pressure through the lid; lachrymation; slight intolerance of light; pyrexia.

CATARRHAL OPHTHALMIA.—In addition to the symptoms of acute ophthalmia there is a thin muco-purulent discharge.

CHRONIC OPHTHALMIA.—The symptoms of acute ophthalmia in a modified form; perhaps history of acute ophthalmia; perhaps presence of trichiasis, or closed lachrymal punctum, or severe neuralgia.

PURULENT OPHTHALMIA.—Acute burning pain, felt not in the eye only but in the temple, forehead, and cheek; sensation as of a foreign body; bright scarlet colour of conjunctiva;

swelling of the conjunctiva, both palpebral and ocular, the ocular swelling is called *chemosis*; copious discharge of pus; more or less of lachrymation and intolerance of light; the lids are stiff, swelled, red, and shining, perhaps opened with difficulty; pyrexia.

PURULENT OPHTHALMIA OF INFANTS. — At commencement the margins of the lids are red and stick together; conjunctiva red and velvety; chemosis very marked, occasionally so extreme as to evert the lids; copious discharge of pus; restlessness; hot skin; rapid pulse; thirst.

GONORRHOËAL OPHTHALMIA. — Add to the history of contagious, an exaggerated form of purulent ophthalmia.

SCROFULOUS OPHTHALMIA occurs in early life; extreme intolerance of light as a rule; not very great vascularity; small pustules (phlyctenulæ) at the margin of the cornea, with large tortuous vessels leading to it; exceedingly persistent.

A red, thickened, fleshy-looking state of the palpebral conjunctiva (*granular conjunctiva*) is a frequent sequence of the ophthalmias.

PTERYGIUM. — An enlargement of the conjunctiva, triangular with the apex at or over

the cornea; it may be transparent, or red and fleshy—the apex more transparent or white.

KERATITIS (*inflammation of the cornea*).—Haziness of the cornea; pink colour of the sclerotic at the upper and lower border, or at the whole circumference of the cornea; usually intolerance of light and some lachrymation; possibly suppuration, opacity, and ulceration.

OPACITY OF THE CORNEA.—When resulting from inflammation between the laminae of the cornea, it is called *nebula* if slight, *albugo* if more developed. The opacity resulting from a cicatrix on the surface of the cornea is termed *leucoma*.

ONYX.—The formation of pus between the layers of the cornea, which trickles down to the lower margin of the corneal surface.

HYPOPYON.—When pus sinks to the lower part of the anterior chamber.

ULCERATION OF THE CORNEA. A depression with a sharp margin; adjacent vascularity; margin clear or opaque.

STAPHYLOMA OF THE CORNEA.—Partial projection of the cornea; colour white and opaque,

possibly with black stains; history of inflammation.

CONICAL CORNEA.—Increased convexity of the cornea; transparency; apparent increase of brilliancy; occasionally slight opacity at the apex of the cone, which is usually in the centre; sight at first short—subsequently indistinct; frequent between thirty and forty.

ARCUS SENILIS.—White discs of opacity at the upper and lower margins of the cornea, which gradually extend round the circumference.

SCLEROTITIS.—A pink zone round the cornea; more or less of conjunctival injection; intolerance of light; lachrymation; pain around the orbit.

STAPHYLOMA SCLEROTICÆ.—A projection of the sclerotic of a bluish-black colour.

IRITIS.—Change of colour in the iris—the dark becoming red, the blue and grey becoming green; the naturally fibrous appearance of the iris becomes indistinct; the form of the pupil is altered and its mobility impaired, there is a pink vascular zone in the sclerotic around the cornea; a few large conjunctival veins are

seen running backwards. Iritis is divided into *traumatic*, the typical form; the *syphilitic*, where there is great effusion of lymph forming frequently reddish brown nodules, and other symptoms of syphilis; the *rheumatic* marked by rheumatism elsewhere; the *strumous* occurring in the strumous habit.

When the iris is adherent to the lens behind, or to the cornea in front, or the pupil is elosed by inflammatory lymph, the terms *synechia anterior*, *synechia posterior*, and *atresia iridis*, are used respectively.

IRIDEREMIA.—Congenital absenee of the iris.

COLOBOMA.—Congenital malformation of the iris, so that the pupil appoaches the margin of the eornea in a pointed manner.

MYOSIS.—A eontraeted and immobile pupil.

MYDRIASIS.—A dilated and immobile pupil.

The surgieal student should regard the two eonditions just referred to as symptomatic of other and more important states.

ALBINISM is evidenced in the eyes by a pinkish iris and intoleranee of light.

CATARACT.—Greyish, bluish, or amber-tinted

white opacity behind the pupil ; vision gradually impaired or clouded ; a dull light is more favourable to vision than a bright one ; when a lighted candle is held before the eye, the inverted reflexion is indistinct or absent ; daylight is discerned after the complete destruction of vision. The student must remember that in almost every person past middle life, there is some discolouration of the lens. Many varieties of cataract have been enumerated, I am disposed to agree with Malgaigne that there are only two—the lenticular and the capsulo-lenticular. The lenticular is of a bluer white than the capsulo-lenticular and does not occupy so large a field.

GLAUCOMA.—Greenish or greyish-drab discolouration of the pupil ; greatly impaired or absent vision ; the pupil dilated and immobile ; the iris is thrust forward against the cornea and close behind it is the discoloured lens ; the cornea is slightly uneven, hazy, perhaps vesicated ; there is some brown mottled discolouration of the sclerotic, the zonular vessels of which are slightly congested ; the eyeballs are extremely hard ; occurs after middle life ;

both eyes are usually affected; the ophthalmoscope reveals excavation of the papilla of the optic nerve and pulsation of the arteria centralis retinae. Glaucoma may be acute or chronic.

WEAK SIGHT.—Inability of the eyes to maintain clear vision of minute objects without frequent intervals of rest; floating black spots—*muscae volitantes*—are occasionally present; slight intolerance of light.

SYNCHYSIS (*unnatural fluidity of the vitreous body*).—The eyeball is smaller and softer; the iris is tremulous; the retina may become insensible, or the lens opaque.

RETINITIS.—Vision rapidly impaired, or lost; severe deeply-seated pain felt in the forehead, temple, and cheek; flashes of light; pyrexia; delirium; subsequently external vascularity and a dull, contracted iris. The intensity of the symptoms may be *acute, subacute, or chronic*.

AMAUROSIS.—More or less impaired or perverted vision: perhaps spectra, as *muscae*

volitantes, or flashes of light, or cloudiness; perhaps intolerance; dilatation and impaired mobility of the iris; no opacity of the lens (discolouration of the lens, after middle life, is common); no inflammatory symptoms in any ocular texture.

MYOPIA.—Short sight.

PRESBYOPIA.—Long sight.

HYDATIDS, TUBERCLE, AND CANCER in the eye may be known by their respective symptoms. In their investigation the ophthalmoscope will be of great service.

CHROMATO PSEUDOPSY.—Inability to distinguish between the allied tints in composite colours, as browns, neutrals, and greys; inability to distinguish between the primary colours, red, blue, and yellow, or between these and the secondary and tertiary colours, such as green, purple, orange, and brown; or inability to distinguish between any colour, properly so called, so that black and white (light and shade) only are discernible. Colour-blindness is generally, though not invariably congenital.

DISEASES OF THE EAR.

INFLAMMATION OF THE EXTERNAL AUDITORY MEATUS.—*Catarrhal*: Muco-purulent or purulent discharge; pain in the ear; generally occurs in infancy. *Phlegmonous*: pain, severe, tensive, throbbing; tenderness on pressure or motion of the jaw; stuffed feeling in the ear; a buzzing noise; partial deafness; swelling evident to the aural speculum.

ACCUMULATION OF CERUMEN OR EPITHELIUM.—Apparent to the speculum auris. There are usually symptoms of slight inflammation of the external meatus.

POLYPI AND FUNGOUS EXCRESCENCES.—Apparent to the speculum auris; perhaps discharge, partial deafness, and sense of weight or tension.

INFLAMMATION OF THE MEMBRANA TYMPANI.—Severe and deeply-seated pain, extending over the side of head, increased by coughing, sneezing, and swallowing, and worse at night; sense of fulness; noises in the ear; deafness, partial or complete; pyrexia; the membrane is duct and opaque, possibly vascular.

INFLAMMATION OF THE TYMPANUM. — Severe pain in the ear and adjacent parts, which will probably become of a throbbing character; pyrexia, possibly delirium, rigors; deafness; purulent discharge (from bursting of abscess through the membrana tympani); perhaps twitchings or paralysis on side of head affected; no symptoms connected with the external meatus or with the throat and Eustachian tube. Symptoms of caries of the mastoid process of the temporal bone may follow. It is supposed that the greater number of cases of deafness arise from *chronic inflammation* of the tympanum, without active symptoms.

THROAT DEAFNESS. — (A vague expression.) Probably present or recent symptoms of catarrh; great congestion of the fauces and enlarged tonsils; crackling sounds during deglutition; difficulty in forcing air through the affected Eustachian tube when a forcible expiration is made with the mouth and nostrils closed.

NERVOUS DEAFNESS. — The symptoms are of a negative character, there being no evidence of affections of the external passage, the membrana tympani, the tympanum, or the Eustachian tube.

SURGICAL DISEASES OF THE DIGESTIVE SYSTEM.

SALIVARY FISTULÆ.—A fistulous aperture, or apertures, in the buccal or submaxillary regions; the apertures filled with granulations; discharge of saliva.

CANCERUM ORIS.—Circumscribed swelling, usually on the cheek; ulceration, of a greyish or brown sloughy character at the site of the swelling and the parts immediately contiguous thereto; discharge of foetid saliva, pus, and blood; foetor of the breath.

HARE-LIP.—This congenital deficiency involves no diagnosis, and requires no description.

EPITHELIOMA OF THE LIP.—(See Epithelioma.)

RANULA.—A globular, fluctuating (cystic), enlargement under the tongue; if large, speech, deglutition, and respiration are impaired, the tongue is displaced, and there is difficulty in closing the mouth.

TONGUE-TIE.—Congenital shortness from above downwards, and prolongation forwards, of the frænum linguæ impeding suckling and articulation.

GLOSSITIS.—Great swelling and prolapse of the tongue; tenderness; speech and deglutition difficult; possibly respiration may be impeded. This affection may be idiopathic or a part of mercurial ptyalism.

ABSCESS OF THE TONGUE.—After the symptoms of inflammation of the tongue, a fluctuating enlargement appears. In abscess under the tongue, swelling and fluctuation may, possibly, be perceived above the hyoid bone.

PROLAPSE OF THE TONGUE.—Protrusion of the tongue beyond the lips; the tongue of dark colour, enlarged, and dry; dribbling of saliva; speech and deglutition difficult.

SYPHILITIC ULCERATION OF THE TONGUE.—Irregular induration underneath the ulceration; perhaps copper-coloured everted edges; no discharge; no loss of substance; no marginal warty growths. Other secondary appearances are present.

EPITHELIOMA OF THE TONGUE.—(See Epithelioma.)

CANCER OF THE TONGUE.—(See Cancer.)

CLEFT PALATE.—A congenital deficiency requiring no description.

STRICTURE OF THE ŒSOPHAGUS.—*Spasmodic* : difficulty or impossibility of deglutition occurs very suddenly ; probably other symptoms of hysteria. *Organic* : deglutition persistently difficult ; possibly painful obstruction to an ordinarily-sized bougie. *Paralysis* of œsophagus is indicated by difficulty of swallowing without any obstruction to the bougie ; cerebral symptoms may be present. In *dilatation and sacculation* of the œsophagus there is also difficulty of swallowing, the food does not feel to the patient as if it reached the stomach, and it is vomited in two or three minutes.

TONSILLITIS.—Enlargement ; pain of a throbbing character ; difficulty of swallowing ; deafness on the affected side ; nasal tone of voice, swelling under the jaw ; pyrexia ; rigors ; chronic enlargement is occasionally but not always due to inflammation ; it is indicated by hoarseness of voice, difficulty of deglutition, noisy respiration. The *uvula* is frequently elongated under the same circumstances.

HERNIA.—An enlargement—oval, round, or pyriform ; the enlargement receives an impulse

and increases in size from coughing ; the enlargement, save under peculiar circumstances, can be made to disappear quickly or slowly by the use of pressure, or by placing the patient in the horizontal position ; the enlargement is smooth, elastic, and possibly gurgling, or soft, doughy, and irregular ; irregularity of the bowels ; dyspepsia ; torminæ. *Strangulated* hernia : the enlargement cannot be made to disappear ; inability to pass fæces or flatus ; sense of constriction in the abdomen ; vomiting, ultimately of a stercoraceous character ; anxiety ; restlessness ; despondency. To these symptoms of obstruction may follow those of inflammation and gangrene.

STRICTURE OF RECTUM.—Possibly evident to the finger ; usually seated about two or three inches from the anus ; defæcation painful and difficult ; the fæces are in small, flattened fragments ; diarrhœa ; irritability of the bladder ; leucorrhœa in the female ; tympany of the abdomen ; ultimately uleeration of the rectum above the stricture.

CANCER OF RECTUM.—Induration and uleeration detectible to the finger ; pain and weight

in the rectum; defæcation especially painful; aching of the back and legs; symptoms of stricture; constant sensation as of fæces in the rectum; depression; cachexia; discharge of mucus or blood, singly or together; ultimately cancerous implication of the adjacent structures.

ULCER OF THE RECTUM.—Detectible to the finger as a button hole; usually occurs just within the sphincter at the posterior part of the bowel; defæcation is painful; mucous discharge; perhaps spasmodic contraction of the sphincter ani; patient frequently sits on one hip; irritability of the urinary organs.

IMPERFORATE ANUS.—This affection requires no description. The student will remember the several varieties; thus, the anus may be closed at the surface of the body by a thin membrane, or there may be a complete membranous septum at some distance from the surface, or there may be entire absence of the sphincter and anus.

FISSURE OF THE ANUS.—On everting the integuments of the anus the fissure will be visible; intense pain on defæcation; mucous discharge; spasm of sphincter ani; the body is supported on one hip in the sitting posture. It is not infrequently associated with ulcer of the rectum.

CANCER OF THE ANUS.—(See epithelioma). Cancer of the rectum—schirrus may extend to the anus but very rarely attacks it primarily.

FISTULA IN ANO.—History of ischio-rectal abscess; apparent to the eye externally, and to the finger in the rectum; more or less discharge of pus. There are three varieties—complete, blind internal, and blind external. The blind external will reveal induration and tenderness externally, and the finger will detect a ragged aperture internally: a bent probe may be introduced from the bowel.

HÆMORRHOIDS.—Enlargements round, flat, or pedunculated, of a blue or red colour, detectible by the finger, in the lower bowel, and may usually be seen after the evacuation of fæces or an enema; pain and prolapse of the gut on defæcation; hæmorrhage during and frequently acute pain after defæcation; in addition to heat, pricking, or smarting pain, there is a feeling as of the presence of a foreign body; aching of the back; irritability of bladder; mental depression.

PROLAPSUS ANI.—A ring of mucous membrane protruding at the anus sufficiently evident to the eye; sphincter lax; folds of integument around the anus large and loose.

RECTO VESICAL FISTULA.—Probably cancer is present, or lithotomy has been performed; urine escapes by the rectum; flatus and *faeces* *may* escape by the urethra; excoriation around the anus. Very rarely a catheter has been forced from the urethra into the rectum.

DISEASES OF THE RESPIRATORY SYSTEM.

NASAL POLYPUS.—On examination when a forcible expiration is made, the mouth and healthy nostril being closed, a soft gelatinous-looking, dark red tumour is seen; at the commencement there is a stoppage of the breath on the affected side; the voice is altered; sense of stuffing; deformity follows from pressure on surrounding parts.

OZÆNA.—Profuse and persistent purulent discharge from the nostrils having, in some cases, a very *fœtid* odour; headache, depression, lachrymation; the mucous membrane can be seen to be swelled and red. Ozæna has been divided into the catarrhal, strumous, and syphilitic varieties.

ACUTE LARYNGITIS.—Pain in the larynx; tenderness on pressing the thyroid cartilage; extreme dyspnœa with paroxysmal exacerbations; cough, of a spasmodic character; loss of voice; difficulty of swallowing; pyrexia; delirium. In *chronic laryngitis* the symptoms are, pain, dyspnœa, cough, and painful deglutition. *— ap-voice & loss of voice*

ULCERATION OF THE LARYNX.—Dyspnœa; cough, occurring in suffocating paroxysms; purulent expectoration; pain; tenderness; painful deglutition. *& ap-voice*

ŒDEMA GLOTTIDIS.—Urgent dyspnœa occurring suddenly in unhealthy systems, in sore throat, or during an attack of erysipelas; absence of chest disease is regarded as negative evidence.

POLYPUS OF THE LARYNX.—Sense of impediment to respiration, speech, and deglutition; dyspnœa and cough increasing in urgency and frequency of paroxysm; hoarseness, or shrillness, or loss of voice; the movements of the tumour on inspiration and expiration may be heard by placing the stethoscope over the larynx.

FOREIGN BODY IN THE LARYNX.—The symptoms

will vary according to the position of the body and its mobility or fixedness; cough; dyspnœa; pain; the stethoscope will discover its looseness or its position; whistling sound in larynx or bronchus; expiration more difficult than inspiration. If a foreign body enters the bronchus, it is usually the right one; there will be feebleness or absence of the respiratory murmur on the affected side.

BRONCHOCELE.—Enlargement soft and elastic in the region of the thyroid body; no pain or tenderness, or discolouration of skin; slips out of the finger during deglutition; possibly dyspnœa and dysphagia.

DISEASES OF THE GENITO-URINARY SYSTEM.

CYSTITIS (*inflammation of the bladder*).—Probably history of gonorrhœa, or lithotrity, or calculus, or stricture, or gout, or application of a blister in the vicinity; pain and tenderness in the hypogastric and iliac perinæal or sacral

regions; micturition very frequent and alternates with pain, difficulty, and straining; mucous pus and blood, singly or combined in the urine.

CHRONIC CYSTITIS OR CATARRHUS VESICÆ is said to be present when the symptoms of acute cystitis occur in a milder form; mucous sediment often very copious; phosphatic crystals under the microscope.

PARALYSIS OF THE BLADDER.—Probable presence of cerebral or cerebro-spinal symptoms; retention of urine occurring suddenly; perhaps dribbling of the urine; a rounded tumour above the pubes dull on percussion; probably the bladder may have got distended before any attempt at micturition; a catheter passes with ease and the urine flows through it gently; paralysis has been divided into that of the body (complete retention) and that of the neck incontinence, which incontinence must be distinguished from “dribbling.”

STONE IN THE BLADDER.—Distinct crepitus on the introduction of a sound; pain in the loins; pain in the region of the bladder especially after micturition; pain at the end of the penis; sudden stoppage of the stream of

urine during micturition ; frequent micturition ; deposits in the urine of the urinary salts and mucus. In sounding, a roughened feeling arising from certain abnormal conditions of the bladder must not be confused with the “click” of a calculus. When a stone is sacculated or fasciculated, more or less difficulty will attend the appreciation of the symptoms.

TUMOURS OF THE BLADDER. — An immoveable enlargement, detectible by the sound or explorer, which may be made to pass over the unattached sides ; irritability of the bladder ; possibly, but rarely, retention of the urine ; polypus of the bladder illustrates these symptoms. *Cancer and epithelioma* occur after middle age ; to the symptoms of a fixed tumour add those of frequent micturition ; pain ; cachexia ; mucus, pus, and blood in the urine ; possibly the microscope may reveal the cancer cell, or *masses* of epithelial cells. A “*villous vascular*” growth is spoken of by authors ; it is distinguishable by hæmaturia without any other abnormal phenomena.

INFLAMMATION OF THE PROSTATE GLAND. — Probable history of gonorrhœa, or stricture, or

ealeulus, or injury from instruments; pain and sense of heat and weight in the perinæum; the finger in the rectum discovers enlargement and tenderness of the inflamed gland; micturition is frequent and attended with a peculiar spasmodic difficulty; defæcation is painful. *Chronic inflammation of the prostate gland* is an expression used to designate a milder form of the symptoms of inflammation attended by the discharge of a viscid, ropy mucus, or mucus and pus, either with the urine or during defæcation.

ABSCESS OF THE PROSTATE GLAND.—Probable, but rarely, history of acute inflammation, of injury caused by urethral instruments, or of pyæmia; obscure enlargement in the perinæum; enlargement and tenderness and deep fluctuation evident to the finger in the rectum; rigors; ultimately it may burst into the urethra, more rarely into the rectum or at the perinæum.

HYPERTROPHY OF THE PROSTATE GLAND occurs after fifty; detectible to the finger in the rectum; the catheter discovers elongation and increased curve of the prostatic portion of the urethra; slight straining at micturition; the act of micturition requires a longer period;

the urine becomes ammoniacal, foetid, and full of mucus; retention of urine may occur.

CANCER OF THE PROSTATE.—Pain in the groin and perinæum; micturition very frequent and painful; urine occasionally tinged with blood, more frequently followed by blood and cancerous fluid or debris; enlargement of the prostate detected by a digital exploration of the rectum and by the introduction of a catheter.

CALCULI OF THE PROSTATE are obvious to the sound in the urethra; possibly detectible by the finger in the rectum; frequency, pain, and difficulty of micturition.

GONORRHOEA.—*First stage*: from three to five days after contagion there is a feeling of heat and itching at the orifice of the urethra; swelling and redness of the lips of the urethra. *Second stage*: at the end of one or two days there is a more or less copious discharge of pus; swelling of the penis; redness and tenderness of the glans; extreme pain on passing water; stream of water diminished; uneasiness in the perinæum and around the anus; erections are attended with pain and curvature of the penis (chordee); possibly there may be added symptoms of inflammation of the

bladder, or testicle, or inguinal glands, or there may be hæmorrhage, enlarged and indurated follicles, urethral abscess, phymosis, paraphymosis, rheumatism, and papular eruptions. *Third stage*: thin muco-purulent discharge, perhaps intermitting (gleet); occasional tenderness on passing water. *Gonorrhœa in the female*: swelling, discharge, and tenderness on the contact of urine; comes on suddenly; a large portion of the mucous surface implicated; obstinacy of duration.

URETHRITIS.—Probable history of local irritation—introduction of urethral instruments, excessive venery, contact of menstrual and leucorrhœal fluids, morbid states of the urine, as the lithic and oxalic, and certain medicines, as guaiacum and cayenne pepper; more or less copious muco-purulent discharge; perhaps a few days, or earlier, after the appearance of the discharge, slight smarting on the passage of urine; probable duration about ten days. *Vaginitis* is an analagous affection in the female.

URETHRAL ABSCESS.—Probable presence of stricture, or urethritis and gonorrhœa; increased difficulty of micturition; rigors; a

deeply-seated hard enlargement in the perinæum; great depression of the system.

STRICTURE OF THE URETHRA. — *Spasmodic*: recent exposure to cold or free indulgence in wine, or application of a blister in the vicinity; great straining at micturition; urine passes in a slender stream or in drops; retention; tumour above the pubes dull on percussion; pyrexia. *Inflammatory stricture*: the symptoms of stricture occurring during some inflammatory condition of the urethra. *Organic stricture*: frequency of micturition; after the cessation of micturition a few drops of urine retained in the urethra escape spontaneously; diminished calibre of the stream of urine; the stream may be twisted, or forked, or scattered; great straining at micturition, which also requires a longer time for its performance; complete retention may occur; ultimately the health fails, or there is urinary abscess, or extravasation of urine. In all forms of stricture, difficulty in introducing a bougie or catheter is the last and highest confirmatory evidence. When a bougie or catheter, after previous attempts at catheterism, is not “grasped” by the stricture, a *false passage* is supposed to exist.

EXTRAVASATION OF URINE.—History of stricture; retention of urine occurs, and during the straining efforts at micturition a tearing sensation is experienced in the perinæum, possibly a little urine is now passed, and the extreme desire to micturate is somewhat abated; soon hot pricking pains are felt in the perinæum, scrotum, groins, and perhaps the penis, and in the same parts which are more or less swelled and œdematous, red patches appear, followed by black spots; pyrexia, followed by extreme depression of the vital powers.

URINARY FISTULÆ. — History of urinary abscess which has been opened by nature or art; the opening is most frequent at the perinæum, but it may be found at the scrotum, inner side of the thighs, or in the groin; more or less urine escapes through the aperture during micturition; the margins of the aperture are indurated and everted.

EPISPADIAS.—A congenital aperture or fissure at the upper surface of the penis, communicating with the urethra. Frequently associated with deficiency of the anterior wall of the bladder.

HYPOSPADIAS.—A congenital deficiency at the under part of the penis so that the urethra communicates with the surface; more or less urine escapes by the aperture; the urethra may terminate at the aperture or pass to the end of the penis.

PHYMOSIS.—A congenital or acquired contraction of the preputial orifice; the prepuce cannot be drawn backwards over the glans without difficulty.

PARAPHYMOSIS.—A narrow or phymotic prepuce, which being drawn behind the glans causes great constriction, and cannot be returned; swelling or congestion of the glans.

BALANITIS.—The glands and preputial lining red, swelled, and suppurating; the discharge is thick; superficial excoriations of the glans; the pain and tenderness are uniform over the glans; frequently the prepuce is phymosed.

HERPES PRÆPUTIALIS.—Red patches covered with minute vesicles; the vesicles become more opaque, and leave excoriations; shallow, but always small, ulcers.

WARTS OF THE PENIS.—(See Warts.)

CANCER OF THE PENIS.—(See Cancer and Epithelioma; the latter more commonly attacks the penis.)

MALPOSITION OF THE TESTICLE.—A testicle may remain in the abdomen or in the inguinal canals, or it may pass into the perinæum, or it may pass through the femoral ring. The testicle will probably be in a pouch and be moveable; if in the perinæum it may be moved into the scrotum or into the groin. A testicle that has passed through the femoral ring will be turned upwards on to the abdomen like a femoral hernia. The scrotum on the affected side will be empty, and probably deficient in structure.

ORCHITIS. — *Acute*: probable presence of gonorrhœa, or history of injury; enlargement; pain; extreme tenderness; slight effusion into the tunica vaginalis; aching in the loins; pyrexia; vomiting. *Chronic*: enlargement, oval, uniform, smooth, and hard; a sense of weight; pain and tenderness. *Strumous*: enlargement of a nodular description; little, if any, pain or tenderness; frequently there follow the symptoms of abscess and a fungous protrusion of the semeniferous tubes. Abscess is very rarely associated with acute inflammation of the testicle.

ATROPHY OF THE TESTICLE.—After inflammation from excessive venery, or injury, or other cause,

there follows an increasing persistent diminution in size.

HYDROCELE. — A pear-shaped enlargement occupying one side of the scrotum; fluctuation; smooth semielastic hardness; translucency of the enlargement is generally, though not invariably obvious by transmitted light; a slight sense of weight is experienced, but there is entire absence of pain and tenderness; the epididymis and testis which are slightly enlarged may be felt at the posterior part of the sac. A *congenital hydrocele* is said to exist, when the fluid can be made to ooze into the abdomen. Hydrocele occasionally occurs on both sides.

ENCYSTED HYDROCELE. — A small, irregular, hard, and elastic enlargement occurring in connection with the testicle, and frequently with the epididymus at the posterior part; the testis remains distinctly defined.

HYDROCELE OF THE CORD. — A small spherical or ovoid enlargement over and in the course of the spermatic cord; it may occur within the ring, or close to the testicle, or at any intermediate part; it rarely receives an impulse from coughing; pressure causes no diminution in size. It is mainly a disease of childhood.

HÆMATOCELE.—After an injury (very rarely without), there is a slowly increasing, heavy, semielastic, pear-shaped swelling; transmitted light shows no transparency; there is no impulse on coughing; the scrotum may be dusky or even ecchymosed.

VARICOCELE.—On taking hold of the spermatic veins they feel knotty and cord-like, or like a “bag of worms;” the veins form a conical enlargement with the apex at the inguinal ring, and the base at the testicle; the enlargement may be lessened by equable pressure or the horizontal position, it is increased by exertion, coughing, and inspiration; occasionally there is marked pain.

TUMOURS OF THE TESTICLE.—*Cancer* (which is, perhaps, invariably of the encephaloid form). See the remarks on Cancer. The absence of inflammatory symptoms, of syphilitic symptoms, and of the very chronic symptoms of all the non-cancerous tumours, affords valuable negative evidence. Other tumours of the testicle are the fibrous, fibro-plastic, enchondromatous, and cystic.

SPERMATORRHOEA.—Probable history of masturbation; nocturnal emissions of semen; in

severe cases, emissions at stool or with the friction of clothes; mental innervation; more or less varicocele usually attends this affection.

CANCER OF THE SCROTUM.—(See Epithelioma.)

ŒDEMA, ERYSIPELAS, AND HYPERTROPHY may implicate the scrotum as well as any other part of the integument.

VULVITIS AND VAGINITIS.—(See the remark on Vaginitis, under the head of Gonorrhœa.)

VESICO-VAGINAL FISTULA.—The speculum reveals a communication between the bladder and the vagina after a tedious or difficult parturition; constant escape of urine by the vagina. *Urethro-vaginal fistula* is not uncommon.

ENTERO-VAGINAL FISTULA.—The speculum detects a communication between the upper and outer part of the vagina and the small intestine; escape of fæces and flatus by the vagina.

RECTO-VAGINAL FISTULA.—The speculum reveals a communication at the posterior wall of the vagina leading to the rectum; escape of fæces and flatus by the vagina.

IMPERFORATE HYMEN.—Needs no description.

VARICOCELE OF THE LABIA.—A soft, knotted, painful enlargement in the labia; increased size in the erect position; diminution in size by pressure and the horizontal position. The labia is also subject to *inflammation*, *hypertrophy*, *erysipelas*, corroding ulcer, cancer, epithelioma, cystic and other growths, and in children to a form of sloughing phagedæna.

CYSTOCELE.—Prolapse of the anterior wall of the vagina implicating the bladder will be indicated by symptoms connected with micturition and the urine, as *rectocele* or prolapse of the posterior wall implicating the rectum will produce rectal disturbance.

HYPERTROPHY OF THE BREAST may occur during pregnancy, and in the unmarried especially at puberty; general increase of bulk; when very large the surrounding integuments are dragged down by its weight.

INFLAMMATION AND ABSCESS OF THE BREAST (milk abscess).—Swelling, redness, pain, and tenderness; pyrexia; œdema follows and the pain becomes throbbing. *Chronic abscess*: enlargement with very great induration, perhaps

indistinct fluctuation after many months ; the limits of the enlargement are not very distinct ; there is frequently retraction of the nipple ; a grooved needle discovers pus. *Lacteal calculi* are occasionally found ; they are generally of oblong form, with one end at the nipple.

NEURALGIA may occur alone, or as a symptom of almost every other disease of the breast ; if alone, there are usually symptoms of hysteria.

TUMOURS OF THE BREAST. — *Partial hypertrophy or glandular tumour* : usual in women under thirty-five ; the enlargement is usually small ; it may become as large or even larger than a large orange ; progress very slow ; not adherent ; surface nodulated, and not very distinctly defined ; frequently commences at the margin of the gland ; no discolouration of the skin ; occasionally there is pain, especially at the catamenial periods ; no retraction of the nipple. It may be concurrent with a cystic growth. *Cystic growth* : not frequently larger than a filbert ; globular ; elastic ; frequently multiple ; an exploring needle or trochar will discover fluid. *Hydatids* present similar symptoms to cystic growths. Fibrous, cartilaginous, osseous, enlargements may be found

in the breast. *Cancer* may appear in the form of a small, irregular, stonily-hard enlargement, or the whole of the breast may be implicated; the tumour or gland, circumscribed at first, becomes adherent and immoveable; the skin becomes shrivelled, adherent, red, hard, and glazy; retraction of the nipple; pain slight at first, afterwards becomes severe; cachexia; invasion of the neighbouring lymphatic glands; secondary deposits. *Schirrus* is the form of cancer most commonly found in the breast, more rarely *encephaloma* and its hæmatoid, and melanotic varieties are found; *colloid* cancer is exceedingly infrequent.

INJURIES.

[The object of this section does not require a description of all the injuries which are usually treated in surgical works. The surgery of injuries is chiefly remedial. Hence, only those injuries which involve diagnostic considerations will be here referred to: such are

wounds of the viscera, viz., lungs, heart, liver, stomach, intestines, and kidneys; fractures, dislocations, injuries of the head and the spine, and their sequences. The phenomena of shock and traumatic delirium will be considered separately; although they are merely the effects of injuries, yet they occur so frequently, and are so significant, that the student cannot too well appreciate their importance.]

SHOCK.—The skin is cold and perspiring; the patient lies quite still, possibly the muscles of the rectum and bladder are relaxed, the contents, consequently, escape in the one case and are retained in the other; the pulse is small and fluctuating, or imperceptible (syncope); there is trembling and partial loss of consciousness; nausea and vomiting.

TRAUMATIC DELIRIUM. — *High traumatic delirium*: history of free indulgence in alcoholic drinks; recent injury—within a few days; hot skin, flushed face; movements violent; quick pulse; delirium—fierce, shouting, raving, or singing; excessive thirst. *Low traumatic delirium*: here, also, history of indulgence in alcoholic drinks; very similar to delirium tremens; skin cold and face pallid;

tremor; pulse quick and small; delirium of a muttering, restless, suspicious character.

WOUNDS OF THE VISCERA.—*Wounds of the lungs*: recent injury, with or without external lesion; shock more or less marked; skin blanched; extreme dyspnœa; cough; spitting of blood; hæemothorax; pneumothorax; emphysema; pneumonia; later, empyema. A small wound might cause few or no symptoms. *Wounds of the heart*: most frequently fatal; seat of the wound, and its direction implicating the heart; small intermittent pulse; tendency to syncope; increased cardiac dulness; friction, bruit; extreme anxiety; dyspnœa. *Injury of the liver*: very fatal; shock probably extreme; pallor and coldness of the integuments (indicating internal hæmorrhage); pain at the seat of injury; sickness; later, jaundice, pain, and tenderness in the right hypochondrium. *Wounds of the stomach*: severe shock; vomiting of blood; contents of stomach may escape at the wound. In *wounds of the intestines*, severe shock; possibly escape of fæces; intense pain at the seat of injury, soon diffused over the abdomen; if the patient survives long enough to pass a motion, it will be

of a dark colour from the presence of blood. *Wounds of the kidneys*: severe shock; probably, though not necessarily, blood in the urine; later—vomiting, and pus in the urine. *Injuries to the bladder*: severe shock; acute pain in the abdomen and pelvis; inability to pass urine; no urine passes by the catheter; if a small quantity passes or is removed by the catheter it is mixed with blood. Where a wound communicates with the bladder there may be an escape of urine.

FRACTURES GENERALLY. — The symptoms common to all fractures are deformity, unnatural mobility to the surgeon, loss of mobility to the patient, crepitus, pain, ecchymosis, and swelling. (Fractures are divided into simple, simple with a wound, compound, transverse, oblique, comminuted, and bent.)

FRACTURES OF THE NASAL, MALAR, AND SUPERIOR MAXILLARY BONES.—Swelling, ecchymosis, crepitus; possibly depression.

FRACTURE OF THE INFERIOR MAXILLA.—Irregularity of teeth; mobility of the fragments; crepitus; inability to move the jaw; flow of saliva from the mouth. The fracture may occur at any part, but more frequently near the symphysis.

FRACTURE OF THE HYOID BONE. — Angular irregularity of the bone detectible to the finger; pain from pressure, speaking, and swallowing; perhaps dyspnœa.

FRACTURES OF THE CLAVICLE. — *Near the centre*: the shoulder sinks downwards, forwards, and inwards; the sternal portion of the clavicle appears to project; crepitus when the shoulder is returned to its natural position. *Fracture between the coraco-clavicular and the acromio-clavicular ligaments*: little or no deformity; pain; crepitus; perhaps slight irregularity. *Fracture external to the coraco-clavicular ligament*: the external fragment turns forwards, inwards, and slightly downwards, taking a position at right angles to the axis of the clavicle. In all fractures of the clavicle the patient leans forward, supporting the elbow with the sound arm.

FRACTURES OF THE SCAPULA. — *Fracture of the body*: swelling; crepitus; pain on moving the arm. *Fracture of the acromion*: flattening of the shoulder; crepitus on raising the arm, the deformity being removed at the same time; irregularity of the spine of the scapula; the humerus may be moved in any direction. *Frac-*

ture of the coracoid process: inability to bring the arm upwards and forwards; crepitus may be detected by pressing the finger between the origins of the great pectoral and the deltoid muscles. *Fracture of the neck of the scapula and the coracoid process*: sinking of the shoulder; lengthening of the arm; great projection of the acromion process; crepitus on lifting the arm; great mobility of the arm; deformity easily removed by manipulation, but returns immediately the support is taken away. The possibility of this injury is doubted by some surgeons.

FRACTURES OF THE HUMERUS. — *Through the anatomical neck*: slight irregularity at the inner aspect of the shoulder joint, resulting from projecting of the upper extremity of the shaft; slight shortening; crepitus may be felt and heard; pain; swelling; loss of motion. In the impacted form there is impaired mobility, with obscure crepitus—the latter being partly due to fracture of the great tuberosity; increased projection of the acromion; slight shortening. *Fracture at the junction of the epiphysis*: the head of the bone may be felt in the glenoid cavity, but is unaffected by rotation

of the elbow; a projection may be seen at the inner side of the joint, below the coracoid process; at the projection, the smooth rounded upper extremity of the shaft may be felt; the arm is directed downwards, outwards, and backwards; the upper fragment is drawn outwards. *Fracture at the surgical neck*: the symptoms are mainly those of the previous fracture, save that it is a little lower down, and the upper extremity of the shaft may be felt rough and irregular. When, in a fracture at this spot, the shaft is impacted in the upper fragment, many of the symptoms of fracture are absent; motion is partially impaired; slight deformity; considerable force is required to produce crepitus. *Fracture of the large tuberosity*: greatly increased breadth of the joint; the head of the humerus is drawn to the inner margin of the glenoid cavity, while the tuberosity is drawn to the outer margin; the finger can detect a sulcus between the two portions. *Fracture of the shaft*: deformity; shortening; increased mobility; crepitus. *Fracture close above the condyles*: fore-arm with the fragment drawn backwards; diminished distance between the acromion and the external

condyle; crepitus; pain. *Fracture of the condyles*: pain; crepitus; mobility of the fragment; deformity slight or absent.

FRACTURES OF THE RADIUS AND ULNA.—*Fracture of the olecranon*: inability to extend the arm; the fragment may be felt above the elbow; an interval may be felt immediately behind the joint. *Fracture of the coronoid process* is extremely rare; it may be known by dislocation of the ulna backwards; great projection of the olecranon; pain; crepitus. *Fracture of the shafts of the radius and ulna*: pain; swelling; crepitus; more or less deformity. *Fracture of the lower extremity of the radius (Colles's)*: occurs at from half an inch to an inch from the articular extremity; the fragment is drawn backwards and outwards, the hand following it; an abrupt swelling appears at the back of the wrist; a more diffused swelling appears at the front of the fore-arm, corresponding to the lower extremity of the shaft of the radius; increased projection of the styloid process of the ulna; the deformity easily reduced by extension, but returns when extension ceases. There may be other fractures of the lower ends of the radius and ulna, which, with the fractures

of the hand, may be sufficiently recognised by the ordinary symptoms of fracture.

FRACTURE OF THE RIBS occurs most frequently in the middle or fixed ribs; sharp pain, increased by inspiratory or other motion; irregularity of the affected bone or bones; crepitus; abdominal breathing. Fracture of the costal cartilages and sternum may be known by similar symptoms.

FRACTURES OF THE PELVIS.—Inability to stand; mobility of the fractured part; crepitus; perhaps injury to the urethra, bladder, or rectum. In fracture of the acetabulum there may be eversion of the corresponding limb, but there is slight or no shortening and greater mobility than in fracture of the neck of the femur. In fracture of the sacrum, which is very rare, and of the coccyx, there would be pain; swelling and crepitus.

FRACTURES OF THE FEMUR.—*Fracture of the neck of the femur within the capsule* generally occurs after middle life; shortening of the limb; eversion; diminished prominence of the trochanter, which, with the neck, seems to rotate on the segment of a smaller circle than on the uninjured side; incapability of motion;

crepitus; manipulation is exceedingly painful. Occasionally there may be inversion, though this symptom is more common in fracture of the acetabulum; shortening may not occur immediately, and frequently increases. *Fracture of the neck external to the capsule*: severe pain, greatly increased by motion; diminished prominence of the trochanter; trochanter rotates in a very small circle; crepitus well marked; eversion very distinct—perhaps inversion; much shortening. In the *impacted* form of this fracture the symptoms are less evident, thus eversion, shortening, pain, crepitus, and loss of power are less marked; the trochanter is nearer the crest of the ilium; moderate extension fails to produce the proper length. *Fracture of the great trochanter* is frequently associated with fracture of the neck external to the capsule. When the trochanter is simply separated from the shaft it may be at some distance from it. *Fracture of the shaft of the femur*: shortening; the upper fragment projects forwards, the lower upwards and inwards; eversion; crepitus. *Fractures of or near the condyles*: are easily diagnosed from the thinness of the soft coverings in addition to the other symptoms of fracture.

FRACTURE OF THE PATELLA.—Inability to extend the limb; a sulcus between the separated portions detectible by the finger. *†*

FRACTURES OF THE TIBIA AND FIBULA.—Loss of power, irregularity or deformity, and crepitus will guide the student to a correct diagnosis in this class of injuries. In dislocations of the ankle there is fracture of the inner malleolus or the lower extremity of the fibula (Potts' fracture) as the dislocation is outwards or inwards.

FRACTURES OF THE FOOT present no special symptoms.

DISLOCATIONS GENERALLY, simple or compound, are marked by deformity, uselessness of the affected joint, and extreme difficulty in removing the deformity, which, however, when removed, does not usually return.

DISLOCATION OF THE LOWER JAW.—The mouth is widely and fixedly open; speech is difficult and indistinct; deglutition is impaired, hence saliva flows from the mouth; there is a hollow corresponding to the glenoid cavity, and an oblique projection in front of it.

DISLOCATIONS OF THE CLAVICLE.—The sternal end may be dislocated in front of, above, or

behind the sternum, which injuries are very apparent; the dislocation backwards may impede respiration and the circulation of the head and neck. The outer end may be dislocated upon, or beneath the acromion—lesions abundantly evident to the finger.

DISLOCATIONS OF THE SHOULDER.—*Dislocation of the head of the humerus downwards*: lengthening of the limb; flattening of the shoulder; the concavity of the glenoid cavity may be felt as well as the globular head of the humerus in the axilla; the elbow is directed downwards, outwards, and backwards. *Dislocation forwards*: slight shortening; elbow directed backwards; emptiness of the glenoid cavity which has a projection anteriorly and internally underneath the clavicle; marked projection of the acromion. *Dislocation backwards (infraspinat)*: the elbow is directed forwards; the head may be found on the dorsum of the scapula. *Partial dislocation forwards and upwards*: projection of the acromion; projection of the head of the humerus at the anterior border of the glenoid cavity; depression under the acromion; if an attempt be made to raise the elbow it strikes against the acromion.

DISLOCATIONS OF THE ELBOW.—*Dislocations of the radius and ulna backwards*: great projection of the olecranon backwards; elbow bent and immoveable; the trochlea and capitellum may be felt in front of the elbow. *Dislocation of the radius and ulna backwards and inwards*: in addition to the symptoms of dislocation of both bones backwards, there is extreme projection of the external condyle. *Dislocation of the radius and ulna backwards and outwards*: in addition to the symptoms of the first variety there is great projection of the head of the radius, the rotation of which may be easily felt. *Dislocation of the ulna backwards*: increased projection backwards of the olecranon; forearm flexed, pronated, and immoveable. Fracture of the coronoid process is frequently associated with this injury. *Dislocation of the radius forwards*: the elbow is partially flexed; the forearm is midway between supination and pronation; pronation may be completed, supination cannot. *Dislocation of the radius backwards*, like dislocation of the same bone outwards, is very rare; in both cases the head of the bone may be traced without difficulty.

DISLOCATIONS OF THE WRIST AND HAND.—

Dislocations of the hand from and with the carpus, and dislocations of the fingers need no comment.

DISLOCATION OF THE HIP.—*Dislocation of the head of the femur, upwards and backwards*: (on the dorsum of the ilium) shortening of the limb about two inches; inversion of the knee and foot; the knee and foot are also slightly in advance of, and the great toe rests on the dorsum of the foot of the sound limb; diminished prominence of the great trochanter, which may also be felt nearer the crest of the ilium; adduction and inversion may be partially effected, but the contrary movements are quite impossible. *Dislocation backwards*: (into the sciatic notch) shortening of the limb—about half an inch; the great toe of the injured rests on the great toe of the sound limb; slight inversion and slight advance of the affected limb; the prominence of the trochanter and its distance from the ilium are but slightly diminished; the head of the bone, even in thin persons, is distinguished with difficulty. *Dislocation downwards*: (into the obturator foramen) lengthening of the limb—about two inches; there is remarkable abduction, and the

limb is slightly in advance of its fellow; the body is bent forwards; the toes are directed downwards; trochanter depressed. *Dislocation forwards*: (on the pubes) slight shortening of the limb; the hip is flattened; the limb is abducted and the foot is turned directly outwards; the head of the bone may be very distinctly felt on the pubes. *The rare dislocations* are the following: *directly downwards*—the head of the bone being in connexion with the tuber ischii, it is marked by extreme lengthening and slight eversion; *directly upwards*—the head of the bone resting between the two spinous processes, marked by great shortening and complete eversion; *on the spine of the ischium*—slight lengthening, without inversion or eversion, altered position of the trochanter.

DISLOCATIONS OF THE PATELLA are outwards, inwards, and on to its edge. Inability to bend the knee. The new position of the bone is easily ascertained by the finger. Dislocation outwards is the most common.

DISLOCATIONS OF THE KNEE are rarely complete, and if complete, are forwards or backward (more common). The internal and external

dislocations are incomplete. All are sufficiently evident to the fingers of an anatomist.

DISLOCATIONS OF THE ANKLE.—*Dislocation of the foot outwards*: extreme projection of the internal malleolus; the outer edge of the foot is turned upwards, the inner downwards, and the sole outwards; there is fracture of the fibula, three or four inches from the outer malleolus, with a corresponding superficial depression. *Dislocation of the foot inwards*: projection of the external malleolus; the inner margin of the foot is directed upwards, the outer downwards, and the sole inwards; the internal malleolus is fractured. *Dislocation of the foot backwards*: lengthening of the heel; shortening of the foot; fracture of the fibula near its lower extremity. *Dislocation of the foot forwards*, which would be known by greatly increased length of foot, is not a well authenticated accident.

DISLOCATION OF THE BONES OF THE FOOT.—Among the displacements of the bones of the foot, those of the astralagus are the most frequent and the most important, and which may be outwards, inwards, backwards, and forwards in relation to the calcis, the relation-

ship of the astralagus to the tibia being undisturbed. The dislocations alluded to, with those of the other bones of the foot, will be amply evident on anatomical grounds.

INJURIES PERTAINING TO THE CEREBRO-SPINAL SYSTEM.—*Fracture of the skull*: if simple, there may be an irregularity as a depression and a contiguous projection; there may also be to a greater or less degree symptoms of concussion, or compression, or inflammation affecting the brain. *Compound fracture of the skull* presents unmistakable evidence to the eye, the finger, and the probe; here, also, the phenomena indicative of concussion, or compression, or, later, of inflammation will probably be present. In both the simple and compound varieties of fracture the inner table of the skull may occasionally be more injured than the outer. *Fracture of the base of the skull*: hæmorrhage from the nose, or ears, or both; escape of serous fluid from the ears; severe concussion or compression, without great injury to the cranial vault. The nature of the injuring force in this, as in all other accidents, will be duly estimated in diagnostic considerations. *Concussion of the brain*: partial or complete

insensibility occurring immediately after an injury; skin pale and cold; pulse feeble; pupils contracted or dilated; vomiting; sighing respiration. *Compression of the brain*: skin usually hot and perspiring; insensibility; partial or complete paralysis; pupils dilated and insensible; involuntary evacuation of fæces and retention of urine; pulse slow and large; stertorous or whiffing respiration. *Traumatic encephalitis*: redness and heat of the skin; pulse quick and hard; great pain in the head, with intolerance of light and sound; confusion of ideas; disturbed sleep; occasional and increasing delirium, or paralysis, or convulsions; the tongue dry; complete loss of appetite; severe vomiting; obstinate constipation. Rigors, stertorous breathing, and suddenly increased severity of the cerebral symptoms indicate the formation of pus. *Concussion of the spine*: paralysis of the lower extremities, varying in degree from debility to entire loss of motion; impaired sensation of the same parts; more or less loss of power over the rectum and bladder. *Fractures of the spine*: when a vertebra is fractured there is pain at the spot, tenderness on pressure, possibly crepitus; alte-

ration of the normal curve, the part above the fracture being directed forwards, and irregularity of the spinous processes at the injured part; inability to move the body or to sustain its weight; paralysis, more or less pronounced, of the parts below the fracture. *Dislocations of the spine* are extremely rare, and are frequently associated with fracture. When a vertebra is displaced it is only at one side, the articulation with its fellows at the other side remaining undisturbed. These dislocations, which are usually in the neck, are almost invariably fatal. *Inflammation of the spinal cord*, from injuries, especially from penetrating wounds, is evidenced by paralysis, spasmodic contractions, and loss of sensation of the parts below.

The symptoms resulting from lesions of the spinal cord, of whatever character, will vary with the position of such lesion. If the *lumbar or lower dorsal vertebrae* are affected there is paralysis of the lower extremities and of the muscles of the pelvic viscera; the penis is semierect. In injuries implicating *the upper dorsal and lower cervical* portions of the spine there will be, in addition to the symptoms just

described, impaired respiration, and paralysis of the upper extremities; while if the injury be *at or above the third cervical vertebra* there will be immediate death. ✓

THE END.

INDEX.

	PAGE
ABSCCESS, acute	65
„ chronic	65
Adenitis	92
Adhesion	52
Albinism	99
Amaurosis	101
Anatomy the basis of me- thodical examination .	18
Ancylobletharon	94
Aneurism	89
„ diffused	89
„ false	90
Aneurismal varix	90
Angeioleucitis	92
Anorexia	61
Anus, imperforate . . .	109
„ fissure of	109
„ cancer of	110
Anus, fistula of	110
„ prolapse of	110
Arcus senilis	98
Art and science	1
Arteritis	91
Arthritis	84
„ strumous	84
„ chronic rheu- matic	84
Atresia iridis	99

	PAGE
Articular system, symp- toms of	22
Atropine	37
Auditory meatus, inflam- mation of	103
Auditory meatus, polypi of	103
„ „ fungous excrecences of	103
BALANITIS	121
Bennett, Dr. Hughes, method of examina- tion, researches . . .	17
Bladder, paralysis of . .	114
„ stone in	114
„ tumours of	115
„ vascular growth . .	115
„ cancer of	115
„ epithelioma of . . .	115
Boil	67
Bone, suppuration . . .	77
„ abscess of	78
„ atrophy of	79
„ hypertrophy of . . .	79
„ cystic tumour of . .	80 .
„ caries	78
„ necrosis	78
„ exostosis of	79

	PAGE
Bougies	40
Brain, compression of	145
„ concussion of	144
Breast, hypertrophy of	126
„ inflammation of	126
„ abscess of	126
„ tumours of	127
„ neuralgia of	127
Bronehoele	113
Bruit de soufflet	52
Bubo, acute	70
„ chronic	70
Bunion	87
Bursæ, inflammation of	86
CANCER, scirrhus	75
„ encephaloma	75
„ fungous hæmato-	
todes	76
„ melanotic	76
„ colloid	76
Cancerum oris	105
Carbuncle	67
Caries	78
„ of the vertebra	81
Cataract	99
Cerebro-spinal system,	
injuries of	144
Cerumen, accumulation	
in the ear	103
Chancre, varieties of	69
Cheloid tumour	76
Chemical reagents	37
Circulatory system, symp-	
toms of	23

	PAGE
Chromato-pseudopsy	102
Coloboma	99
Conjunctiva, granular	96
Constipation	62
Contracted joints	89
Cornea, opacity of	97
„ ulceration of	97
„ conical	98
Corns	76
Cough	62
Crepitation	51
Crepitus	51
Cystitis	113
„ chronic	114
Cystocele	126
DEFORMITY	53
Delirium	61
Delirium, traumatic	129
Detail in registration	19
Diagnosis a theory	4
Diarrhœa	62
Digestive system, symp-	
toms of	27
Discharges	57
Discolouration	54
Dislocations generally	138
„ of lower jaw	138
„ of clavicle	138
„ of shoulder	139
„ of elbow	140
„ of wrist and	
hand	140
„ of hip	141
„ of patella	142

	PAGE		PAGE
Dislocations of knee . .	142	Eye, symptoms of . .	25
„ of ankle . .	143	Eyelids, tumours of . .	93
„ of foot . .	143		
Dyspnoea	62	FLAT-FOOT	88
		Fluctuation	50
EAR, symptoms of . .	26	Fractures generally . .	131
Ectropion	94	„ of nasal bones . .	131
Elasticity	50	„ of malar	131
Encephalitis, traumatic .	145	„ of superior	
Enlargement	47	maxillary	131
Enlargement, use of the		„ of inferior	
term	14	maxillary	131
Enlargements, examina-		„ of hyoid bone . .	132
tion of	15	„ of clavicle	132
Entero-vaginal fistula .	125	„ of scapula	132
Entropion	94	„ of humerus	133
Epispadias	120	„ of radius and	
Epithelioma	75	ulna	135
Epithora	94	„ of ribs	136
Erysipelas, cutaneous .	68	„ of pelvis	136
„ cellulo-cuta-		„ of femur	136
neous	68	„ of patella	138
„ cellular	69	„ of tibia and	
Evacuation	60	fibula	138
Examination, how com-		„ of foot	138
menced	13	Fragility	57
Examination, Rostan's			
method	17	GANGLION	87
Exostosis	79	Gangrene	67
Expectoration	62	Genito-urinary system,	
Exploring needle . . .	43	symptoms of	29
Eye, examination of . .	16	Glaucoma	100
Eye, hydatids of . . .	102	Glossitis	106
„ tubercle of	102	Glottis, œdema of . .	112
„ cancer of	102	Gonorrhœa	117

	PAGE		PAGE
HÆMATOCELE	124	Lachrymal apparatus,	
Hæmorrhage	60	diseases of	94
Hæmorrhoids	110	Lagophthalmos	94
Hare-lip	105	Lameness, varieties of .	59
Hair falling off. . . .	60	Laryngitis, acute . . .	112
Hardness	49	„ chronic	112
Heat of skin	61	Larynx, ulceration of .	112
Hernia	107	„ polypus of	112
History, previous, in		„ foreign body in. . .	112
cases	21	Lateral curvature . . .	82
Hordeolum	93	Lens, surgical use of .	35
Hydrocele	123	Lip, epithelioma of . .	105
„ congenital	123	Light, intolerance of . .	60
„ encysted	123	Loose cartilages in joints	85
„ of the cord	123	Lupus non exedens . . .	68
Hydrophobia	71	Lupus exedens	68
Hymen, imperforate . .	126		
Hypopyon	97	MEMBRANA tympani, in-	
Hypospadias	121	flammation of	103
		Methods of examination	
INTEGUMENTARY system,		and registration, iden-	
symptoms of	21	tical	13
Intestinal obstruction .	62	Microscope, surgical use	
Irideremia	99	of	34
Iritis	98	Micturition, difficult . .	63
„ traumatic	99	„ frequent	63
„ syphilitic	99	Mobility, impaired . . .	59
„ strumous	99	Mollities ossium	79
„ rheumatic	99	Morbus coxæ	86
		Musæ volitantes	101
KERATITIS	97	Muscular system, symp-	
Knock-knee	89	toms of	23
		Mydriasis	99
LACHRYMATION.	60	Myopia	102
		Myosis	99

	PAGE		PAGE
NEVUS	91	Osteo-aneurism	81
Nail, ingrowing of	77	Otoscope	35
Nasal polypus	111	Ozoena	111
Nausca	61		
Necrosis	78	PAIN	46
Nervous system, symp-		Palate, cleft	106
toms of	24	Paronychia	67
,, deafness	104	Paraphymosis	121
Neuralgia	93	Penis, warts of	121
,, of joints	85	,, cancer of	121
Neuritis	93	Periostitis	77
Neuroma	93	Phagedæna	66
		Phlebitis	91
ONYCHIA	67	Phlebolites	92
Onyx	97	Phlegmasia alba dolens	92
Opacity	56	Phraseology of registra-	
Ophthalmia, tarsi	93	tion	19
,, acute	95	Phymosis	121
,, catarrhal	95	Post mortem examina-	
,, chronic	95	tions	34
,, purulent	95	Prepuce, herpes of	121
,, neonatorum	96	Presbyopia	101
,, gonorrhœal	96	Probes	42
,, scrofulous	96	Progress in surgery	11
Ophthalmoscope	36	Prostate gland, inflam-	
Orchitis, acute	122	mation of	115
,, chronic	122	,, abscess of	116
,, strumous	122	,, hypertrophy of	116
Œsophagus, stricture of	107	,, cancer	117
Ossæous system, symp-		,, calculi of	117
toms of	22	Psoas abscess	81
Osteitis, acute	77	Pterygium	96
,, chronic	77	Ptosis	94
Osteo-enchondroma	80	Pulsation	50
Osteo-cancer	80	Pulse	60

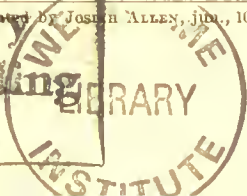
	PAGE		PAGE
Pyæmia	69	Spinal cord, injuries of	146
Pyrexia	53	Spina bifida	83
RANULA	105	Spine, concussion of . .	145
Recto-vesical fistula . .	111	„ fractures of	145
Recto-vaginal fistula . .	125	„ dislocations of . .	146
Rectum, stricture of . .	108	Statistics, impossible . .	7
„ cancer of	108	Stethoscope, surgical use	
„ ulcer of	109	of	35
Registration, imperfect .	6	Stillicidium lachrymarum	94
Respiratory system, sym-		Strabismus	87
ptoms of	28	Symbletharon	94
Rectinitis	101	Synchisis	101
Rickets	79	Synechia anterior . . .	99
SALIVARY fistula	105	„ posterior	99
Sclerotic staphyloma . .	98	Synovitis, acute	83
Sclerotitis	98	„ chronic	83
Scrotum, cancer of . . .	125	Syphilis, primary . . .	69
„ œdema of	125	„ secondary	70
„ erysipelas of . .	125	TALIPES equinus	88
„ hypertrophy of . .	125	„ calcaneus	88
Shock	129	„ varus	88
Size, diminution of . .	48	„ valgus	88
Skull, fracture of . . .	144	Temperature	57
„ compound frac-		Tenderness in a joint,	
ture of	144	how ascertained . . .	16
„ fracture of base . .	144	Tenderness on pressure	47
Sloughing phagedæna . .	67	Testis, malposition of .	122
Softness	49	„ atrophy of	122
Sounds	39	„ tumours of	124
Specula	38	Tetanus	71
Spermatorrhœa	124	Thirst	61
Spinal cord, inflamma-		Throat deafness . . .	104
tion of	146	Tongue-tie	105
		Tongue, abscess of . .	106

	PAGE		PAGE
Tongue, prolapse of . . .	106	Urethral abscess . . .	118
„ syphilitic ulcer-		Urethritis	118
„ ation of . . .	106	Urethro-vaginal fistulæ .	125
„ epithelioma of .	106	Urinary fistulæ	120
„ cancer of . . .	106	Urine, diseased states of	64
Tonsillitis	107	„ extravasation of	120
Torticollis	88	„ retention of . . .	64
Transparency	56	VAGINITIS	118—125
Trichiasis	94	Varicocele	124
Tumours, fatty	72	Varicocele of labia . . .	126
„ fibro-cellular .	72	Varicose aneurism . . .	90
„ painful subcu-		Varix	91
„ taneous . . .	72	Vesico-vaginal fistulæ .	125
„ fibrous	73	Vibration	51
„ fibro-nucleated	73	Viscera, wounds of . .	130
„ fibro-plastic .	74	Vomiting	61
„ recurring fibroid	74	Vulvitis	125
„ cartilaginous .	74	WARTS	76
„ cystic	74	Weak sight	101
„ epitheliomatous	75	Webbed fingers and toes	77
„ cancerous . . .	75	Wounds of viscera . . .	130
Tympanum, inflamma-		„ lungs	130
„ tion of	104	„ heart	130
ULCER, healing	65	„ liver	130
„ indolent	66	„ stomach	130
„ weak	66	„ intestines	130
„ inflamed	66	„ kidneys	131
„ varicose	66	„ bladder	131
„ vicarious	66	XEROPHTHALMIA	94
„ sloughing	66		
Urethra, stricture of .	119		

Wellcome Library

for the History
and Understanding
of Medicine

Birmingham. Printed by Joseph ALLEN, JUN., 10, Livery Street.





Riley Dunn & Wilson Ltd
EXHIBITION STANDS & BOOKBINDING

